NEW-YORK MEDICAL AND PHYSICAL JOURNAL.

VOL. IV.] OCTOBER, NOVEMBER, AND DECEMBER, 1825. [No. IV.

ART. I. *A Dissertation on the Question, "To what extent has the Vaccine Disease been found to be a preventive of Small-pox?"* By JOHN BELL, M.D. of New-York.

[This Dissertation obtained the Boylston Prize for the year 1825.]

THE importance of this question is evident from the fact that for centuries the small-pox destroyed more than one-tenth of the whole human race;* left deep and indelible marks on nearly all those subjected to it who escaped death, and kept the remainder in a state of perpetual apprehension; and which, notwithstanding the security conferred by inoculation and vaccination, has recently formed no inconsiderable item in our bills of mortality. This question possesses an additional interest and importance in another point of view. Soon after the discovery of vaccination, the most complete credence was given to the absolute and perfect preservative powers of this mild and safe disease against the small-pox.

---

* "By undoubted records it may be shown, that in the course of one century no less than 4,500,000 persons have, in the United Kingdoms, perished by this fell scourge."—*Alex. Monro, on Small-pox, &c.* Edin. 1818.

Until within a few years, it was deemed a species of medical heresy to question this belief: but doubts gradually arose, gained strength, and were at length brought forward in the shape of unquestionable facts, by men whose judgment and observation were not to be doubted. As one extreme is usually followed by the other, it cannot be looked upon as an unfounded apprehension that an unreasonable scepticism will be the natural result, and that the consequent want of confidence in the kine-pox will be a public injury, by preventing the general diffusion of this mild and invaluable prophylactic.

In examining this question, we shall commence with,

I. A brief sketch of the early history of the small-pox.

II. The course of the disease, its varieties, the names which they have received, and its second appearance in the same individual; then examine

III The question of the identity of small-pox and chicken-pox.

IV. History of the varioloid disease as it has appeared in this country.

V. Vaccination; and, finally, offer

VI. Conclusions drawn from the preceding remarks.

I. *Early history of the small-pox and of inoculation.*

Attempts have been made by various writers, to prove the extreme antiquity of this disease in Hindostan and India:* they amount, however, to little more than mere conjecture. The Chinese, as it appears from some Jesuit missionaries formerly resident at Pekin,† fix, with a more than Cambrian absurdity of pretension to antiquity, the first date of this disease at the year 1122 before Christ, and assign their country as the spot where it first made its appearance.

---

* Chais—Essai Apolog. sur la methode de communiquer la petite verole par inoculation. Howell—Inoculation of Small-pox; quoted by Monro, Observations on Small-pox. Edin. 1818.

† Pere Entre colles, Lettres Edif. et Curieuses.

The earliest reasonable accounts, however, go no farther back than the beginning of the sixth century. The Greeks and Romans, it is perfectly obvious, were wholly ignorant of this disease. No mention is made of it by any Greek writer; and it is absolutely incredible that authors who have given us such minute and accurate accounts of other diseases, should have neglected one so striking in its symptoms, so fatal in its termination, and one that left such indelible traces of its course, had such a disease existed in their age and country.* No more conclusive proof is wanted that the Romans knew nothing of this disease, than the fact that there was no name for it in the Latin tongue, the word *variola* having been used for the first time in A. D. 580, by Marius, Bishop of Avenches.† Dr. Mead states, on the authority of an Arabian manuscript in the University of Leyden, that the small-pox was observed for the first time in Arabia in 572, the epoch of the birth of Mahomet.

The first authentic account of this disease was written by Ahron, an Arabian physician, quoted by Rhazes.‡ His work,

---

* The learned Dr. Mead says it is absurd to suppose that anthrax, phlyctena, and other cutaneous diseases, known to the Greeks under the names of ανθραξ, επινυκτις, εξανθηματα, &c., could have any reference to the small-pox.

† The ingenious writer of an article on the small-pox, in the Dictionnaire des Sciences Medicales, says that Pliny, wishing to prove that the gout was a disease new to Italy, thought no other evidence necessary than the mere fact that there was no Latin name for it. The same writer says, that of all the monuments which have come down to us from antiquity, the statues, pictures, medals, &c., none give us indication of the existence of the small-pox; and that of all the descriptions given by the Greek and Latin historians of their countrymen, no one is spoken of as marked by this disease; and farther, that none of the names given on account of some personal peculiarity, as Ovidius *naso*, M. Tullius *Cicero*, Horatius *cocles*, Curius *dentatus*, Lucius *balbus*, have the slightest reference to the marks of the small-pox.

‡ It is a singular fact, and one mentioned by Dr. Mason Good, (Study of Med., Vol. II. p. 412,) that this physician recommended the cool treatment in this disease, which unfortunately the absurd theories of the humoral pathologists in more modern times compelled to give place to the opposite and too often fatal treatment.

written at the commencement of the seventh century, is lost. He states that it was brought into Egypt at the time of the irruption of the Saracens into that country, and that it followed their conquests, successively spreading through Syria, Chaldea, Mesopotamia, and Persia, from whence it traversed the eastern part of Asia, and spread over China, Tartary, &c. In the eighth century the Saracens conquered Spain, France, Sicily, and Naples, and brought this fatal disease in their train. Soon after this period, an accurate account of the small-pox, referred to above, was written by Rhazes, an Arabian, in which he enters into a minute description of its symptoms, course, and treatment. Avicenna and Hali Abbas, likewise Arabians, wrote valuable treatises on this disease in the beginning of the tenth century. Some time in the eleventh century, as Dr. Mead supposes, it first appeared in England, upon the return of the crusaders from the Holy Land. Germany, Poland, Sweden, and all the north of Europe, were soon subjected to it. Its progress farther north was slow, probably in consequence of the low temperature of those countries: it gradually, however, made its way over Russia, Norway, and Lapland, and at a later period reached even Iceland and Greenland.*

At the time of the discovery of America (1492), the small-pox was wholly unknown on the western continent. It was carried to the island of St. Domingo by the Spaniards in 1517, and under the burning sun of that tropical climate, spread

---

* Sir G. Mackenzie states, that in the year 1707 the small-pox broke out in Iceland, and proved fatal to 16,000 persons, a fourth part of the whole population; and Crantz informs us that the same disease appeared in Greenland, for the first time, in 1733, and almost depopulated the country.—*Monro, Op. Cit.* p. 65.

"Detharding says, that of 2000 persons who were attacked during the prevalence of this epidemic (1733), only six escaped." *Dict. Med. Scien.* T. 57. p. 39.—This statement appears rather apocryphal, since it has long since been observed that in cold climates, and the winter of warm ones, this disease is much less fatal than under opposite circumstances.

with such rapidity and fatality as to almost depopulate the island. It was some time subsequent to this that it appeared on the main land, where it produced a degree of mortality which is almost incredible. It is computed that in the kingdom of Mexico alone, there died, soon after its introduction, three millions and a half from this destructive disease. It has since repeatedly swept over that immense continent, carrying terror and desolation along with it.

In the beginning of the seventeenth century it appeared in North America, committing its first ravages in Virginia; from whence it gradually travelled west and north, making its first appearance in New England at Boston in 1649. Since that period, every considerable town in North America, from Quebec to New Orleans, has been visited by this fatal disease.

There is no place where the curiosity or cupidity of Europeans have carried them, that it has not in consequence appeared.*

With regard to the inoculation of the small-pox, the epoch of its discovery is undetermined; and whether it was the result of experiment or accident, is unknown. The Chinese, with their usual readiness to lay claim to every improvement or discovery, pretend that it was practised in their country in A. D. 59; but as this date is some five centuries before our earliest probable records of the small-pox, their claim must be considered as inadmissible. There can, however, be no doubt

---

* Perhaps we ought to cite, as an exception to this remark, Van Diemen's Land, in which, notwithstanding the frequent intercourse with Europe, this disease has never yet appeared, as we learn from a letter by James Scott, R. N., dated Colonial Hospital, Hobart-town, published in the London Med. and Phys. Journal for 1824. p. 521.

The same writer farther remarks, that "the vaccine virus has been introduced from the Isle of France and Sydney, but after passing through one or two patients, has become ineffective; and I strongly suspect that the same observation is good respecting the primary symptoms of the venereal disease, as I have not met with any cases of it but in persons direct from Sydney or the Isle of France."

that it originated in the East,* probably in Hindostan, although it claims a high degree of antiquity in Africa,† along the Barbary coast, and in Egypt. Bruce states that inoculation has been practised, from time immemorial, in Nubia, by the negro or Arabia women, and by slaves brought from Dyre and Fegla. It was first performed at Constantinople in 1763, during a peculiarly fatal prevalence of epidemic small-pox in that city. From mothers and nurses, in whose hands this operation was wholly entrusted, Dr. Timoni, a Greek physician graduated at Oxford, then resident at Constantinople, acquired the method, and communicated it to Dr. Woodward of London, in 1713. It seems however to have made no progress in England until 1721, when it was introduced successfully by Lady Mary Wortley Montague, one of whose children had been inoculated a short time previous at Constantinople.

About this period, we find inoculation supported and practised by Sir Hans Sloane, Maitland, Freind, Mead, and others of equal eminence. The practice did not, however, become general without strong opposition. Ecclesiastical bigotry turned its powerful arms against it; and, absurd as it may seem, a clergyman maintained from a public pulpit, that Job was actually inoculated by the devil!‡—thus giving a greater antiquity to the disease than even that claimed by the Chinese.

Dr. Williams maintains, with what reason it is difficult to say, that inoculation was performed in Wales and the High-

---

* Shaw (Travels in Barbary and the Levant,) and La Condamine (Mem. sur Inoculation,) support this opinion, and state that it has been long practised in Georgia, Circassia, and Greece.

† Colden (Med. Obs. and Inq., Vol. I. p. 228,) thinks it came originally from this country; and Mungo Park (in his Travels) confirms the opinion of its high antiquity.

‡ Dr. Massey's "Sermon against the practice of Inoculation," (1722,) with the text, So went Satan forth from the presence of the Lord, and smote Job with sore boils from the sole of his foot to the crown of his head. —Job xi. 18.

lands of Scotland long before its introduction from the East.* Immediately after its successful introduction into England, the attempt was made in this country, at Boston, with success;† from whence it soon spread into the adjacent country, was practised in New-York, New-Jersey, and Pennsylvania, and even as far south as the Carolinas.

It was several years after this before its introduction into France. The opposition which it there met may be judged from the fact, that, as late as 1764, the Faculty of Medicine of Paris decided in favour of the innovation by a vote of fifty-two against twenty-six.‡

With regard to the merits of inoculation, there seems to be but one opinion existing among writers of the present day, which is, that though individuals may derive an advantage from the practice, the great mass of the people are sufferers by it; for the indiscriminate practice of inoculation in all places, serves to diffuse the variolous contagion through the atmosphere, and thus by spreading the disease amongst those who, either from ignorance or obstinacy, including a great majority of the people, have neglected it, and thus renders it a greater evil than good.§ Its operation is perfectly aristocratical; the rich and well-informed profit by it, whilst the poor and ignorant are its victims. This was proved to be the case fifty years since, by tables drawn up by Baron Dimsdale; and "we may fairly affirm," says Good, "that the

---

* Philosophical Transactions, Vol. XXXII.

† Boylston's Account of the Small-pox Inoculation in New England, 1726.

‡ Desoteux, Traité Historique et Pratique de l'Inoculation. 8vo. Paris.

§ Mr. Cross, in his History of the Epidemic Small-pox at Norwich in 1819, gives an eloquent account of the misery and distress which arose from the practice of inoculation. "Variolous inoculation was practised on more than four hundred, each of whom thus became a centre of contagion;" and in the whole of the neighbouring country, "itinerant inoculators, irregular practitioners, and old women, introduced and extended the disease to all quarters by inoculation, regardless of the admonitions given them, because the law authorized no direct measures against them." p. 219.

deaths from small-pox since its introduction have increased, in consequence of the more extensive diffusion of variolous contagion, in the proportion of fourteen or fifteen in every hundred."*

From the year 1726, the period when inoculation became general in Europe, till 1798, the era of the discovery of vaccination, there existed a disposition amongst medical men to disbelieve, or rather to pass over unnoticed, the frequent secondary occurrence of the small-pox. Those who were desirous of introducing the practice of inoculation, felt that this measure would by no means be aided by creating a belief in the danger of a subsequent attack of the disease. Reports of instances of this kind, however, slowly accumulated. Upon the discovery of vaccination, the friends of the innovation immediately instituted a comparison between the severity of the two diseases, and the security which they afforded against a second invasion of the small-pox. In investigating the subject, all the isolated cases were collected together; old writers were examined; and the result of this awakening of public attention to the subject was, that the second appearance of this disease in the same individual, was an incident of no unfrequent occurrence.†

That the inoculation of the small-pox should be prevented by legal interference, is a point perfectly obvious to any one who has properly considered the subject. The evils of the

---

* Study of Medicine, Vol. II. p. 423.

"But it (small-pox) has no tendency, like vaccination, to extirpate the disease; and from the impossibility of rendering it universal, it has actually been found to add to the general mortality of small-pox, by opening a new source for the diffusion of its virus."—*Report of the National Vaccine Establishment.* London, 1820.

† A late writer upon the subject, gives the following list of modern writers who have recorded cases of the second attack of small-pox: Willan, Kite, Withers, Mills, Adams, Ring, Bryce, Laird, Bateman, Woodville, Moore, Hennen, Ramsay, and Smith. Cases are also to be found in the Reports of the National Vaccination Board, and Edinburgh Review, Vol. IX. p. 62.

crime, for it should be considered in that light, do not fall upon the individual alone who commits it. The poor, ignorant, and obstinate, the three classes forming no inconsiderable portion of the great mass of society, are the sufferers; and to satisfy the caprice of one individual, a hundred of his fellows are in consequence exposed to the contagion of a loathsome and dangerous disease. The general diffusion of the practice of vaccination had nearly put an end to this mode of scattering the disease, when the appearance of the varioloid disease, by diminishing the confidence in the virtues of the kine-pock, again excited a wish to follow the old method. The attempt, however, has met with the decided disapprobation of those most interested in the public health, and truly we can hardly conceive how it could be otherwise; for, independent of the objections already assigned, it will shortly be shown that the security which it affords is much less than that conferred by vaccination.*

II. *Course of the small-pox—its varieties—the names which they have received—and its second occurrence in the same individual.*

As we shall have occasion, in the progress of this essay, to institute a comparison between this disease in its most common and striking form, and its varieties and modifications, a brief account of its usual symptoms and course are, in consequence, rendered necessary. In these, neither climate nor time seem to have produced any variation. From Cuba to Iceland the course and duration of the small-pox is the same; and the descriptions of Rhazes and Avicenna, made ten centuries since, are as correct as if drawn from the last year's epidemic.

---

* "Though small-pox and cow-pox," says Dr. Monro, "may be upon the same footing as preventives of small-pox, yet they are by no means so as preservatives of life; *for there have been a greater number who have died from a second attack of small-pox, than from small-pox after cow-pox.*" —Op. Cit. p. 261.

Its earliest symptoms are usually a slight uneasiness in the region of the stomach, and tenderness upon pressure; pain in the head and back, accompanied by languor, drowsiness, vomiting of bile, and sometimes by purging of the same fluid, and occasionally a disposition to perspire. For the next two days the febrile symptoms continue, with occasional temporary exacerbations. The patient starts frequently in his sleep, grinds his teeth, and has convulsive twitchings about the mouth. On the third day the fever is more acute, the skin is hotter, the throat more dry, the eyes red and glaring, with impatience of light; and there are cramps in the legs and severe pain in the back. On the evening of this day, or on the morning of the fourth, an eruption, consisting of small red points, not unlike flea-bites, appear about the face and breast, gradually extending to the extremities. As soon as the eruption is complete, the febrile symptoms disappear.

These papulæ gradually enlarge, and on the fifth day are surrounded by a red border of about a line in breadth, gradually fading into the natural colour of the skin. They are pitted or depressed in the centre, and contain a small quantity of serum. For the next two or three days these vesicular pimples increase in size, and assume a light straw colour. The eruption is supposed to be at its height on the eighth or ninth day, the pustules being prominent, spherical, and hard. At this time febrile symptoms usually make their appearance, the face, and sometimes the whole head, swells and is painful. The eyelids are puffed up; there is a little soreness of the throat, hoarseness, and a slight degree of salivation. On the tenth or eleventh day the swelling of the face begins to subside, or rather seems to be transferred to the hands and feet, wholly disappearing in a few days. By the twelfth day the pustules burst, and their contents drying up, form a dark coloured scab or crust, or the pustules shrink and dry up without bursting. The scabs usually begin to fall off about the fifteenth or sixteenth day, leaving a depression or pit in the skin, except when the disease is very mild, when deep red coloured spots remain on the spots occupied by the pustules, which soon disappear.

This is the variola discreta of the nosologists, or distinct small-pox, and is the form in which the disease usually appears. In the confluent form the pustules are more numerous, but slightly elevated, and with irregular edges running into each other. In this form there is no subsidence of the fever upon the appearance of the eruption, the disease is more fatal, and in some rare instances the system seems to sink under it, with scarce an opposing effort, all the powers of life being apparently crushed upon the first onset of the disease, and death follows before the eruption has fully appeared.*

The contagion of small-pox is limited to a very short distance, and the disease is considerably modified by age, constitution, and the season of the year. Infants, old persons, and those of cold and phlegmatic temperaments, are least liable to contract the disease, and its course is usually less severe and more rarely fatal. An attack of this disease during pregnancy, almost invariably produces the death of the fœtus. A case is recorded by Dr. Jenner, of a pregnant female who had already been subjected to the small-pox. Abortion was the consequence of the re-exposure to the contagion of this affection, and the fœtus was found distinctly marked with small-pox pustules.

---

* A striking instance of this kind occurred in a child, who came under my care during the winter of 1823–4. Alice McCray, aged about three years, was taken on the evening of the 11th March with the usual symptoms of small-pox. I saw her on the 12th; found all her symptoms violent, but not peculiar. A cathartic with a diaphoretic mixture was ordered, and directions were given to keep her moderately cool. On the 13th, I found her in a state of stupor; her face, particularly her lips and eyelids, were much swollen, and her breathing laborious. An infinitely numerous miliary eruption seemed to be trying to force its way through the skin. She died two hours after. I could not find, upon inquiry of the mother and the rest of the family, that any improper treatment had been resorted to; no officious application of heat, or exhibition of stimulating drinks, "to drive out the pox," with the exception of two spoonsful of milk-punch after the stupor had commenced. The cathartic had operated once, and the diaphoretic mixture was regularly administered.

The numerous varieties pointed out by writers upon this disease, founded on slight differences in the appearance of the pustule, such as variola discreta, siliquosa, vesicularis, verrucosa, confluens nigra, sanguinea, corymbosa, petechialis, &c., serve rather to show the care and minuteness with which the disease has been studied, than to indicate any specific differences in which variations in the usual treatment are required.

With regard to the variety which has been called *crystalline*, there is good reason to suppose that this name was generally, if not always, used to designate the small-pox upon its second appearance. It has long since been observed that this disease, modified by a previous attack of the same affection, usually proceeds no farther than the vesicular stage, and that the clear serum escaping from the vesicles and drying on the surface, gives rise to the peculiar, transparent, and hard crusts which have received the appellation horny, or crystalline.* Since the discovery of vaccination, the small-pox, modified by that affection, put on, in many instances, very nearly the same appearance as in the case just mentioned, as we shall show hereafter.

The oldest writers upon the subject speak of the second, and even third appearance of the small-pox in the same individual, as an occurrence by no means rare, and as occasionally proving fatal.† Other writers, before the general intro-

---

* In a case of secondary small-pox described by Dr. Bateman, he says, "there were about fifteen spots on the face approaching to the pustular character, some of them *horny* and tuberculated."—*Med. Chirurg. Trans.* Vol. II. p. 33.

"In the milder cases of secondary small-pox, the pimples pass at once from the state of vesicle to that of incrustation."—*Monro*, op. cit. p. 84.

"Dr. Farquharson," as we learn from the same source, "has assured me, that in the course of his extensive practice, he had had occasion to meet with upwards of one hundred cases of it; and he regards the horn-pox, which occurred before the introduction of vaccination, as a kind of small-pox modified by a previous attack of that disease, exactly in the same manner as is now observed after cow-pox."

† Et possibile est quod (variolæ) accidunt bis vel ter.—*Contin Rhazes*, Lib. 18, Cap. 8. Quoted by Burserius, Inst. Pract.

duction of inoculation, make frequent allusions to it, and in a manner which shows that they were far from believing it to possess an absolutely preservative power.* Modern observation confirms this opinion, and, in conjunction with other facts, serves to show that the course of this disease is as fixed and uniform as the laws of nature.

III. *Identity of the modified small-pox and chicken-pox.*

Writers upon the small-pox, till the end of the sixteenth century, spoke frequently of modifications of this disease, mild in their attacks, and but seldom proving fatal. As more attention was turned upon this subject, a multitude of names were adopted to designate these varieties, such as the spurious, dwarf, volatile, lymphatic, crystalline, and bastard.† Though frequent descriptions were given of these varieties, no doubts of their identity with small-pox were raised until the time of Sydenham, who first spoke of them as "adulterine species, which neither belonged to the genuine small-pox, nor prevented it."

Richard Morton, who wrote a few years after Sydenham, first adopted the term chicken-pox from the vulgar, regarding it at the same time as a mild species of small-pox. In 1767, Heberden first described the chicken-pox as a specific, infectious disease, entirely different from the small-pox.‡ Since that period, until recently, writers have quietly followed on in the same track, more ready to warp stubborn facts into a con-

---

* Diemerbroeck (Anat. Corp. Hum.); Du Haen (Ratio Medend.); Van Swieten (Comment. in Boerhaave); and many others.

† In addition to these, numerous other epithets, founded upon caprice or fanciful resemblances, were given in other countries. In Scotland, the terms swine-pox, hives, nerles, and bleb-pox were used; in Cumberland originated the provincial and barbarous name, water-jaggs; in Germany they had the schaafsblattera, or sheep-pox, the steen-pokken, water-pokken, and wind-pokken.

‡ Med. Transactions of the College of Physicians, London. Vol. I.

venient shape, than to doubt the truth of Heberden's theory. About five years since, Dr. Thompson, the eminent professor of surgery at Edinborough, first publicly questioned the soundness of this doctrine, and in support of the identity of the chicken-pox and the varioloid disease, has produced a train of facts and reasoning of the most conclusive kind.*

If this opinion is sound, and we shall proceed to show the grounds upon which it is founded, varicella must be restored to the situation from which it was taken by Heberden, and be again classed among the varieties of small-pox.†

The reasons assigned by writers upon the chicken-pox for a belief in its specific difference from variola, amongst the most able and zealous of whom are Mr. Bryce, Dr. Abercrombie, and M. Fontanelles of Montpelier, may be arranged under eight heads, each of which will be briefly noticed.

1st. The mildness and short duration of the eruptive fever.

Much weight is deservedly placed upon this point, in distinguishing varicella from variola in its most perfect form; but when compared with the modified forms of this last disease, the peculiarity is at once lost. Dr. Thompson remarks—"I have sometimes seen natural small-pox attack with only a very slight degree of eruptive fever, and the vesicular eruption, supposed to be chicken-pox, often ushered in by a severe febrile paroxysm, of from one to three days' continuance."

Moore, who believes in the distinct nature of the two diseases, in speaking of variola in its mild, and varicella in its most violent form, says, "the symptoms and duration of the previous fever in both maladies are nearly the same. And although the fever of the small-pox is generally incompara-

---

* Account of the Varioloid Epidemic, &c., with Observations on the identity of Chicken-pox and Modified Small-pox; by John Thompson, M. D. &c.

† Van Swieten, the able commentator on Boerhaave, after describing an epidemic small-pox which occurred in 1735, gives it as his opinion that the contagion of small-pox, when weakened in its virulence, particularly during the decline of epidemics, produces the chicken-pox.

bly more violent than that of the chicken-pox, yet, when the small-pox is mild, and the chicken-pox severe, the reverse is the case, for vomitings and delirium occasionally occur in varicella, and the eruption is sometimes ushered in with convulsions;"* and further, "in the severe cases of varicella, the eruption is thrown out in successive crops for two or three days, and the fever does not remit in these instances, so early by one or two days at least."

With regard to the varioloid disease, Thompson, Cross, Bent, Pougens,† and other European writers, cite frequent instances in which the eruptive fever was less severe, and of shorter duration than it usually is in cases of varicella.

Repeated instances have come under my care, in which the febrile stage was so slight as not to prevent the patient's attendance on his ordinary business, and where the number of vesicles did not exceed a dozen, and had commenced drying as early as the morning of the third day. Thus, it is obvious, that no distinctive characteristic can be drawn from the length or degree of severity of the eruptive fever.

2ndly. The rapidity with which the vesicles are formed.

It is difficult to bring forward authorities upon this point, because writers have spoken of the filling of the vesicles in small-pox only in general terms, usually fixing upon the first appearance of the vesicle, and the appearance at which the crust or seal begins to form, as the two important epochs, and leaving all the intermediate stages unnoticed. "In a very great number of undoubted cases of modified small-pox," says Dr. Thompson, "the formation of the vesicles has been as rapid, and their covering as transparent as in any cases which I have known considered to be cases of chicken-pox." During the prevalence of the small-pox the last year, but few *strictly vesicular* cases were noticed, and those occurred chiefly in infants. In these instances the

---

* History and Practice of Vaccination, p. 99.

† Petite Verole chez plus de deux cents individus vaccinés, observée a Millan en 1817.

vesicles rose rapidly, burst early, and were covered by a pale straw-coloured crust as early as the third or fourth day.

In the most malignant cases of small-pox, likewise watery vesicles often form with great rapidity between the pustules, and burst upon the slightest pressure, leaving a raw excoriated surface upon the removal of the cuticle. These, however, rarely if ever immediately follow the eruptive fever. Indeed, in all the cases which have fallen under my observation, this symptom has appeared as late as the 11th or 12th day of the disease, and has been invariably followed by a fatal result.

3dly. Greater dimension of the summit than the base of the vesicles.

No conclusion can be correctly drawn from this point, all vesicles varying in this particular according to the degree of distention from the effused fluid. The small-pox often assumes this appearance as well as all its spurious forms and varieties.

4thly. Want of depression in the centre of the vesicle.

As little dependence can be placed upon this symptom, as it is constant only in confluent small-pox. In all the mild and modified forms of this disease, its presence is comparatively rare. Sometimes, however, the depressions occur in all the vesicles, in others, here and there one has this peculiar appearance, but in by far the greater number of cases, no mark of this kind is visible.

5thly. Want of hardness and prominence in the base of the tubercle.

Much dependence is placed upon this point by Dr. Abercrombie, in pointing out the difference between varicella and the horn-pox. "When," says he, "the contents of the vesicles in the small-pox are let out, the parts of the skin which they covered, are found to be correctly on a level with the surrounding integuments, while the same parts in horn-pox are each elevated above the surface of the skin upon a firm tubercular basis." It seems rather curious that Dr. Abercrombie should have fixed upon a symptom as pathognomonic of the chicken-pox, which has heretofore been con-

sidered as the mark by which spurious small-pox is to be distinguished from the true. Dr. Heim,* in laying down the diagnostic marks between genuine and spurious small-pox, states expressly that the skin which forms the basis of the pustule in spurious small-pox is never raised, while that which forms the basis in true small-pox is often very remarkably raised, and that these elevations frequently remain even after the scabs have fallen off.

Mr. Cross in his history of the varioloid disease which occurred in Norwich in 1819, in speaking of the small-pox, mentions the existence of "vesicles formed of simple elevations of the cuticle, being often intermixed with the most regular pocks, and small incomplete pocks rising near them, which never present the indented character.

"I have seen," says Professor Thompson, "the tubercular elevations which succeed to vesicles and pustules, occur most frequently in natural small-pox, and sometimes present in eruptions supposed to be those of chicken-pox."

Every one who has observed the disease as it has appeared in this country, if his attention has been turned to this point, will unhesitatingly avow the same opinion.

6thly. The appearance of successive crops of vesicles.

Little need be said on this point, as the earliest writers on the small-pox speak of successive crops of eruptions as a no very rare incident, and it will readily be seen by a reference to the history of the modified small-pox as it has appeared within the last few years, that it is of daily occurrence. In the report of the New-town dispensary at Edinburgh, we find it stated, "that in most of the cases of small-pox which we have lately seen, the eruption has decidedly come out in successive crops." Numerous instances of a similar kind in modified small-pox, will be found in Cross's history of the varioloid disease in Norwich.

---

* Horn's Archives for 1809, quoted by Dr. Thompson, p. 202.

7thly. Falling down of the vesicles on letting out the enclosed fluid.

As was stated in speaking of the rapidity with which vesicles are formed in the worst cases of small-pox, they often arise suddenly and are ruptured by the slightest violence, the cuticle falling down in the same way as in varicella, not leaving the slightest prominence on the place which they occupied.

8thly. Uniformity of the eruption in the vaccinated and unvaccinated.

Within the last few years, and since public attention has been more particularly turned to the subject, a certain contagion has been prevalent in almost every part of Europe, and in most of the large cities in this country, which in the unvaccinated has produced what has been on all hands, allowed to be pure small-pox; in a portion of the vaccinated, an affection which has received the name of varioloid disease, and in another portion, what the believers in the specific difference between varicella and variola, believe to be chicken-pox. This fact, conceded by every one, speaks in such clear terms as to need no comment.

Various other points of less importance have been considered as aiding in proving the distinct nature of varicella. One of these is the question whether it can be communicated by inoculation? Some modern writers deny that it can, but on the other hand, we have abundance of testimony that it has frequently been done. Heberden treats it as an established fact; Baron Dimsdale and Willan coincide, and some recent experiments in France show that, although with difficulty, it may be communicated, and that it produces affections varying very much from the original disease.

It is not important, however, to the main question to have this point settled, for allowing that it is still at issue, the balance of proof is overwhelming.

With regard to the general appearance and course of varicella, and any conclusions that might be drawn from observing it as a whole, it will be shown, in speaking of the vario-

loid disease, that we have a regular gradation, both in severity and in the degree of perfection in which the disease appears, (considering pure small-pox as the standard) from the mildest case of chicken-pox, where scarcely an eruption appears, through all the varieties of common varicella, varioloid disease, benignant small-pox, &c. up to the most marked form of confluent small-pox.

In addition to this, recent observation shows most conclusively, that wherever small-pox makes its appearance, all its spurious progeny from horn-pox to varicella follows in its train, and as the parent disease disappears, its offspring die away. In England, Scotland, France, Wirtemberg, Holland, the West Indies, the island of Ceylon, and in our own country, small-pox, varioloid disease, and chicken-pox have been observed, and recorded without any intention of supporting a particular theory, as co-existent and simultaneous in their disappearance.*

IV. *Small-pox modified by vaccination.*

The discovery of vaccination is too recent, and its history too well known to require a notice in this place. Its value began to be estimated, and its general diffusion commenced in 1798. At this time it was supposed to confer a perfect immunity against the attacks of the small-pox. There can be no doubt, however, that cases of the appearance of this disease after the process of vaccination has been passed through, occurred early after its discovery. These were probably few in number, in consequence of the then limited diffu-

---

* "There is no satisfactory proof to be found in our medical records, that these two diseases (variola and varicella), have ever prevailed separately, but many proofs of the fact that all the varieties of the genuine, as well as of the spurious sorts of small-pox have, in the same epidemics, come in and gone out together." Thompson, Opt. Cit. p. 139.

The same opinion is expressed by Mr. Black, Ed. Med. and Surg. Jour. No. 58. p. 44.

sion of the cow-pox, and were all considered as cases of varicella; the distinct nature of this disease being at that time considered as established by Heberden and the writers who immediately succeeded him. As the diffusion of the vaccine disease became more general, small-pox modified by it, occurred with greater frequency, and cases are to be met with in great numbers in writers upon vaccination and varicella, where there is an evident contest in the author's mind, whether he shall follow the dictates of his own good sense, risk the charge of ignorance and call the disease small-pox, or whether he shall follow the beaten path and consider it varicella of a severe character. Dr. Willan says, that in six years he saw seventy-four cases of chicken-pox, which had been mistaken for small-pox after vaccination.* In the present state of our knowledge of these diseases, no one can doubt that the mistake lay upon the other side, and that probably all these were cases of small-pox modified by vaccination.

A spurious small-pox or chicken-pox occurring after vaccination is described in the Journal de Medicine by M. Valentine, as occurring in the department of La Meurthe in France in 1802. A case occurred the same year at Paris, which excited a great deal of curiosity, and drew toward it the attention of Chassieur, Tillet, and other eminent physicians of that capital. No doubt, had the curiosity of the medical profession been turned in that direction, numerous similar instances would have been recorded between this period and the one (about 1816) when public attention first became interested in the subject. Since 1816, the small-pox in its pure form, as well as modified by vaccination, has appeared in Great Britain, France, Germany, Austria, and most countries on the continent.† It is only within the last two or three

---

* On Vaccine Inoculation, by Robert Willan, M.D. &c. 1806, p. 84.

† Mr. Cross in his history of the varioloid epidemic at Norwich, quotes an account of an epidemic small-pox in the kingdom of Wirtemberg in the

years that it has appeared in America, but its course has been so uniform both in Europe and this country, that a description of its appearance here may be considered as applicable to any part of the world.

We shall first give a general description of the ordinary course of the small-pox modified by vaccination, and then point out its peculiarities and variations, and illustrate them with cases.

The commencement of an attack of the modified disease is similar to that of pure small-pox. There is the same languor, lassitude, headach, pain in the back and limbs, heat and dryness of the skin, quickness of the pulse, sickness at the stomach, vomiting, and even in severe cases cornea and delirium. The febrile stage usually continues about three days; on the fourth, a papular eruption makes its appearance on the face and breast, and gradually spreads over the rest of the surface; the whole number of pustules not ordinarily exceeding two hundred.

As soon as the eruption is complete, the febrile symptoms subside. For the next two days the papulæ gradually increase in size, and on the third, or even earlier, present a small vesicle on the apex, which bursts in the course of the next two days, and forms a thin yellow scab, which falls off soon after. This is the mildest and most frequent form of the disease.

In some cases all these symptoms are more severe; the vesicles, instead of drying upon the fifth day, become pustular, continue nearly as long as pure small-pox, and leave indelible

---

years 1814, 15, 16, and 17, collected and arranged by Dr. Elsasser, after an examination of all the official returns of the medical men to the government, by which it appears that precisely similar effects have been produced there as in Great Britain and this country, by the contagion of small-pox acting on the vaccinated.

Similar observations were made in an epidemic small-pox described by Dr. Hodenpyl, as occurring at Rotterdam in 1817 and 18.

marks after them.* On the other hand, instances were not wanting in which the fever was very slight, and the number of pustules very few, not even amounting to a dozen.† In some rare instances the patient suffers from a febrile attack, precisely similar to the one which precedes this disease, and which suddenly subsides at the end of three or four days, without any eruption. These cases occurred in situations where the individuals were exposed to the contagion of either small-pox or the varioloid disease, and under circumstances which justified the conclusion that the affection was produced by that contagion.‡

---

* The most violent case of modified small-pox which fell under my observation, occurred in a young gentleman twenty-two years of age, of a plethoric habit, whom I saw, for the first time, on the second day of the disease. His face was flushed, his eyes red, his skin dry and hot, and his pulse 120, hard and full. He was suffering excruciating pains in the loins and head, and was occasionally delirious. I bled him twenty ounces, and gave him a cathartic. His symptoms were slightly mitigated in the evening. On the next morning, an immense number of minute red pimples made their appearance, so numerous as to give his countenance a deep fiery red colour at a little distance. The next day the eruption was complete on his trunk and extremities, and the febrile symptoms began to subside. On the subsequent day, the fifth of the disease, the eruption presented precisely the appearance of confluent small-pox on the eighth day. The next morning his face, particularly his lips and eyelids, were enormously swollen, and many of the papulæ had become vesicular; of these, about one half reached the pustular stage. He recovered rapidly, but is marked by a great number of small pits, deep, but less in diameter than a pin's head. During the disease, the peculiar smell attendant upon small-pox was perceptible in a very marked degree.

† F. I. S. was attacked with the usual symptoms of the small-pox in a mitigated degree. For the first day, notwithstanding the slight chills, headach, and pain in the back, he attended to his ordinary mercantile concerns. For the next two days he kept within-doors, but was able to amuse himself with books and conversation. On the morning of the fourth day, about a dozen papulæ appeared on the forehead and in the edge of the hairy scalp. He returned to his business in the afternoon, and the few papulæ soon after disappeared, only three of them becoming vesicular. In the same house with this gentleman, several fellow-boarders were then and had been sick with the varioloid disease in a far more severe form.

‡ J. B., aged twenty-three years, had been frequently exposed to the contagion of modified and natural small-pox, and had slept in a *room* ad-

Red blotches, of from one half to three-fourths of an inch in diameter, have, in some instances, preceded the appearance of the papulæ, which in these cases have rarely ever advanced as far as even the vesicular stage, the tubercle, after the second day, gradually diminishing in size till it wholly disappears.* In two cases which came under my care, after the ordinary febrile symptoms, a deep-coloured rash made its appearance on the inferior extremities and the lower part of the trunk, which bore a striking resemblance to the measles, while on the face, breast, and upper extremities an eruption of the varioloid kind was thinly scattered.† Dr. Thompson speaks of cases of nearly the same nature, which he considers as a combination of measles and small-pox after vaccination.

---

joining one in which a person lay sick with this disease. He was attacked with all the symptoms of the small-pox, which gradually increased for the next three days. They were so severe as to require pretty active medical treatment, and to induce me to believe that the eruption would be a plentiful one. From the fourth day his symptoms gradually subsided, but no eruption appeared. There were a few irregular, slightly red blotches on the forehead and breast, but not attended by the slightest elevation of the skin, and which the next day had entirely disappeared.

* Mary L., aged nine, vaccinated when an infant, was attacked with the usual symptoms of the small-pox in a mild degree. On the third day, about fifty blotches, of a dull red colour, varying in size from that of half a dime to a cent, unattended by any elevation of the skin, made their appearance on different parts of the body. A few hours after, a minute red pimple arose in the centre of each, which gradually increased in size for the next twenty-four hours, retaining always its tubercular character, and slowly disappearing in a few days after. She had never had the measles, which were then prevailing in the neighbourhood, and a slight board partition separated the room in which she slept from her brother, then sick with the small-pox.

† John Smith, aged eight years, vaccinated when four years old, but who had never had the measles, was taken with the ordinary symptoms of modified small-pox. On the morning of the third day, an exanthematous eruption, resembling rubeola, appeared on the legs and abdomen, while on the upper part of the body a few varioloid papulæ broke out. None of these ever became vesicular, and at the end of ten days had disappeared. The rash was not visible after the fourth day.

Numerous cases in illustration of these varieties, out of more than a hundred, occurring in a charitable establishment under my charge, and of a great number of which notes were taken at the bed-side, might be adduced; but the numerous recent publications in Great Britain, and the multiplicity of papers upon the subject in our medical journals, render it unnecessary.

With regard to the identity of the small-pox and what has been called the varioloid disease, the question seems so firmly settled in the minds of the medical public, that it may possibly seem a work of supererogation to detail the following experiments, and the interesting case which follows, communicated to me by my friend Dr. Bogert.

A quantity of lymph was taken on the point of a lancet from a patient suffering under small-pox after vaccination, on the third day of the eruption and fifth of the disease, and inserted in the arm of a healthy child of seven years of age, who had neither been vaccinated nor inoculated. Three days after, the point where it was inserted became red and inflamed; a small pustule followed, which contained a fluid on the eighth day. At this time the child sickened, and was confined to its bed. The next day about thirty pustules appeared on its body and extremities. But five of these pustules matturated: the rest gradually disappeared, and were entirely gone by the time the others were scabbed over. This child was afterwards inoculated with the small-pox without taking the disease. In the second experiment on a child similarly unprotected, lymph of the same kind, from another patient, was inserted in the arm, and about two inches below the first puncture she was inoculated with vaccine virus. Two pustules formed, which advanced with about equal rapidity; the varioloid one being a little the largest, and encircled with the broadest areola. On the eighth day they both contained lymph, which soon became purulent. The child at this time had considerable fever, and kept her bed. The next day, about a dozen tubercular eruptions appeared on her back and legs, none of which ever suppurated. Three days after, they had almost wholly dis-

appeared. The patient was afterwards vaccinated, with no other effect than the production of a slight irritation, which lasted two or three days.

The interesting case alluded to above, occurred in a young woman twenty-two years of age, who was vaccinated when a child. She was attacked with the usual symptoms of modified small-pox. For the first two days the fever was severe; on the third an eruption appeared, amounting to about a hundred pustules, on the whole surface. They soon after became vesicular, then horny, or crystalline, and soon after disappeared. Six weeks after, she was delivered of a dead male infant of five months, covered with a marked small-pox eruption. The pocks, which in number exceeded a hundred, were elevated, flat on the top, and from one-eighth to one-fourth of an inch in diameter, and uniformly had a depression in the centre. This fœtus, still in the possession of Dr. Bogert, has been seen and examined by several medical men, who have unanimously pronounced it a case of pure small-pox, apparently at the third or fourth day of the eruption.

With regard to the mortality of small-pox modified by vaccination, European writers all coincide in opinion that it almost never endangers life; and in this country not a single case is on record, nor can I learn from any of the physicians of the four large cities, where it has been most prevalent, that it has, in any instance, proved fatal.

This fact alone speaks volumes in favour of vaccination, and should put to silence and shame the few who, from obliquity of judgment, or a desire of notoriety, have attempted to vilify and abuse it.*

V. *Vaccination.*

The discovery of vaccination—the difficulties which it encountered upon its first introduction—the munificent reward

---

* See Edinburgh Medical and Surgical Journal, No. LVIII., "On the present state of Vaccination;" by Thomas Brown, Surgeon, Musselburgh.

given by the British government to its discoverer—its final victory over prejudice and illiberality, and its general diffusion throughout the civilized world,—are circumstances well known, not to medical men alone, but to all who feel an interest in the general welfare of mankind.

To eulogize this valuable discovery, would be to repeat what has been said of it by every reasonable man who has written upon the subject. Its highest praise is the mere mention of the fact that it has wholly eradicated the small-pox from some countries,* and in all where it has been introduced, has proved a safeguard against its fatal effects.

The present intention is not to enter into the history or nature of this affection, but merely to speak of the probable advantages of thoroughly subjecting the system to its influence.

Dr. Jenner, who probably observed the cow-pox with more interest and attention than any other individual, says that "the constitution loses its susceptibility to small-pox contagion, and its capability of producing the disease in its perfect and ordinary state, in proportion to the *degree of perfection* which the vaccine pustule has put on in its progress, and that the small-pox, if taken subsequently, is modified accordingly."

Although, from the nature of the case, it is impossible to demonstrate the truth of the opinion, that repeated vaccination offers the only method of attaining the end desired by Jenner, reason and the following experiments certainly speak in its favour.

Several individuals were vaccinated in the ordinary mode, and with the usual effect. Soon after, the operation was repeated; a tubercle arose, which produced a degree of soreness which lasted five or six days. A third repetition was followed by inflammation to a less extent; the fourth, still less; and the fifth produced no other effect than would have arisen from the punctures alone, had no virus been inserted.

---

* This was said to be the case in Austria, Denmark, the Isle of Guernsey, the Circle of Rezat in Bavaria, &c.

The same course was pursued several times, and the result was in all instances nearly the same.

Extensive experiment is requisite to determine the truth of this opinion, while the respectability of its origin, and the probability which it bears on its face, should induce those interested to turn their attention to it. The mode proposed by Mr. Bryce is certainly the best now in use; and the process we have just spoken of, may follow it with probable advantage, and at all events without risk.

With regard to the general value of vaccination, the evidence of the most modern medical writers, as Dr. Alexander Monro, Mr. Hennen, Dr. Thompson, Mr. Cross, the late Reports of the London Vaccine Board, &c.; in fine, of every respectable European or American writer, goes to show that their confidence in the power which the cow-pox possesses over the fatal effects of small-pox, is undiminished, and they strenuously recommend its prompt and general diffusion.

VI. *Conclusions.*

1. Small-pox proves fatal in about one in five cases, when contracted naturally.

2. The eruptive diseases known under the names of sheep-pox, swine-pox, water-pox, wind-pox, horn-pox, &c., are all varieties of small-pox, produced by atmospheric influence, constitutional peculiarities, or some other unknown causes.

3. Varicella, or chicken-pox, formerly regarded as a variety of small-pox, but since the year 1767 considered a distinct disease, must be again restored to its former situation, and classed with the varieties just mentioned.

4. Small-pox is modified in three several ways: 1st, by a previous occurrence of the same disease; 2d, by inoculation; and, 3d, by vaccination.

5. Though it is difficult to form even a tolerably accurate estimate of the degree of protection which the first of these cases offers, from the want of sufficiently extensive data, yet it is evident from those which we have, that though cases of

this kind are more rare, they have proved more fatal than those succeeding inoculation.

6. Small-pox, communicated by inoculation under favourable circumstances and in a proper manner, does not prove fatal in more than one in three hundred cases, though its former mortality was much greater.

7. Inoculation should be discouraged in every manner possible, since its performance serves to keep up and diffuse the small-pox amongst those who, from ignorance or negligence, possess no protection against it.

8. Vaccination furnishes, in a great proportion of cases, a complete and perfect immunity against the attacks of small-pox.

9. It modifies the access of small-pox in a slight degree, usually rendering the febrile stage somewhat milder, although the stomach and respiratory organs are often more strongly affected than in its ordinary course.

10. It possesses a controlling power over the progress of inflammation in the eruption, shortens its course, in the majority of cases, prevents its reaching the pustular stage, and in almost every instance obviates the occurrence of secondary fever.

11. The varioloid disease, or small-pox after vaccination, does not endanger life; there being no case on record in which it has proved fatal, after the system has been thoroughly subjected to the influence of the cow-pox.

12. That reason and probability are highly in favour of the truth of Dr. Jenner's opinion, that the security which vaccination offers is in a direct proportion to the degree of perfection of the vaccine process; and that in consequence, it is advisable to re-vaccinate as long as any effect is produced.

13. The vaccine virus, which has now been employed upwards of twenty years, in every civilized part of the globe, has suffered no deterioration; and it now confers all the security against the small-pox which it ever has done.

14. There are no grounds for believing that time weakens, in any degree, the protection which an individual receives from having been once properly vaccinated.

15. It cannot be considered otherwise than the duty, not only of all medical men, but of the public authorities and all interested in the public health, to encourage, as far as is practicable, the practice of vaccination.

Art. II. *On the Proximate Cause of Hydrocephalus Internus.* By John Stearns, M. D. of New-York.

Discrepance of opinion on physiological subjects, is always proportioned to the difficulty of demonstrating the functions of the organ we attempt to investigate. Perhaps no part of the human body so perfectly eludes our research into its minute operations, as the brain. It is not, therefore, singular that the proximate cause of hydrocephalus internus should be liable to very different explanations. Drs. Beddoes, Armstrong, and others, refer it to that high state of inflammation denominated phrenitis; Drs. Quin, Rush, and others, to that diminished state denominated phrenicula, chronic, or asthenic inflammation; others, to a state of debility in the lymphatics; while others assert, with equal assurance, that it may occur under all these various and even opposite conditions of this organ. The incongruity of the last theory with the real truth, must be too obvious to all who believe in that maxim in physics, "that like causes produce like effects," to require any serious refutation. A few moments' consideration will therefore be exclusively devoted to the others. In this investigation it is important to substitute accurate observation of the symptoms and phenomena as they actually occur, for prejudice, pre-conceived theories, and the opinions of others.

As the lymphatic system is every where subjected to the operation of the same laws, a reference to its condition in the hydropic affections of other cavities will enable us to arrive at some just conclusion upon this subject. Do we discover in these, any evidence of local or general inflammation necessarily connected with the inception of dropsy, or that degree of excitement which we find in ordinary phlegmasia? The di-

minished temperature, the pallid aspect of the skin, the œdematous condition of the parts diseased, the low intermittent pulse, and a variety of other symptoms of debility, present a negative answer to this inquiry. I am, at the same time, aware that high febrile action does sometimes supervene to the primary symptoms of dropsy: but this is no greater indication of inflammation than the re-action of a common intermittent induced by nature to remove a debility in the external lymphatics, as this has been to remove a similar debility in the lymphatics of the internal cavities. By pursuing this analogy between the external and internal lymphatics, we shall be enabled to acquire more correct notions of the hydropic affections of the latter. The same remarks applied to the brain, will prepare us to consider *a debility in the lymphatic vessels of the ventricles of that organ as being the real proximate cause of hydrocephalus internus.*

Although this theory is at variance with some high authorities in medicine, I cannot yield my conviction that it is founded upon the immutable basis of truth. It is presumed that the turgid state of the vessels sometimes exhibited on dissection, and adduced as evidence of inflammation, is simply an accumulation of blood in the veins, arising from local obstruction, or inability in those vessels to continue the circulation. If the arteries ever exhibit the same appearance, it must arise from some incidental cause not necessarily connected with the disease. Whether this condition of the veins imparts, by sympathy or mechanical pressure, a correspondent affection to the absorbent vessels, or whether the cause of the former produces a simultaneous effect upon the latter, are questions which I shall not undertake to discuss or determine. A reference to the operation of the most commonly exciting cause, may shed some light on this subject. A vast proportion of the cases which I have attended, has been traced to blows and to other injuries upon the head: and I have no doubt that this cause is much more frequent than is generally imagined. Nurses are too much interested to conceal their own carelessness, and too anxious to escape censure to give

that candid statement to the physician which would enable him to form a correct opinion of the real cause.

The first and immediate effect of a blow on the head is, according to its violence, a partial or total suspension of the vital powers in the part most sensibly affected ; and when the concussion is general, it is accompanied with every symptom of extreme debility. The consequence of this debility in the cerebral vessels, is suspension of the circulation, and accumulation of stagnant fluid. The resistance which this stagnation opposes to the propelling power, excites a more vigorous action, which is increased and perpetuated till the circulation is restored, or the powers of life exhausted by the effort. If this stagnation occur in the veins and lymphatics alone, and the arteries be not proportionably injured, an accumulation of water in the ventricles must be the obvious consequence, thus constituting a true case of hydrocephalus internus : but if the arteries equally participate in the injury, the probable effect will be a case of phrenitis. Aware that phrenitis does not invariably terminate in dropsy, as might be inferred from his theory, Armstrong attempts to explain the failure, by assigning the very extraordinary reason that the former proves fatal before the water has time to accumulate. If all cases of phrenitis proved fatal, it would afford some ground for the admission of this negative proof. But when we reflect that a great proportion do recover, and that in some instances, as I have repeatedly witnessed, the disease is protracted, by repeated relapses, to several months' duration, without producing the least evidence of effusion, we have reason to doubt the truth of a theory so replete with difficulties and so feebly sustained.

I once believed in a similar theory, and was always apprehensive that every protracted case of phrenitis would terminate in effusion. But my repeated disappointments induced doubts, which were at length confirmed into conviction, that this theory is inconsistent, and at variance with the well-known phenomena of the lymphatic system. Instances may however occur, where a local cause applied during the declining stage

of protracted inflammation, may so debilitate the lymphatics as to prevent or impair their power of absorption; and such cases have been cited by some authors, to show that inflammation was the cause of the effusion. The same authors express their astonishment when they have been unable to discover the least trace of inflammation in other cases which they had carefully examined. A solitary case of dropsy without its proximate cause, is a medical phenomenon. Such a discovery will lead to the abandonment of proximate causes as useless, or to the adoption of such as are always and invariably connected and co-existent with the disease. The well-known fact, that dissections frequently exhibit cases of hydrocephalus internus without inflammation, is therefore a sufficient reason to abandon this theory. And I trust that a debility of the lymphatic system, accruing from local or general causes, will always be sufficient to explain the various phenomena of this disease, without incurring the disgraceful imputation of deserting its post.

That this cause produces a general hydropic diathesis, no one will hesitate to admit; and that the same principle is applicable to every cavity in the body where water may accumulate, or to the surface, where it is effused in the form of copious sweats, I trust will be equally entitled to credence. What reason, then, can be assigned for exempting the brain from the operation of the same cause, where the same effects are produced, and where the same system of exhalants and absorbents are presumed to exist? To ascribe one operation to the lymphatics of the abdomen, thorax, and skin, and another to the brain, is inconsistent with that beautiful harmony and order which uniformly control the physical operations of the human system, and equally pervade the system of the universe. This theory also acquires additional confirmation from the similitude of symptoms. The same general languor and aversion to motion, the same weak and intermittent pulse, indicate the same state of debility in hydrocephalus, anasarca, ascites, and hydrothorax. The effects produced by the operation of a local cause upon the brain, and the consequences

of compression arising from fluid accumulating in the ventricles, constitute the only essential difference.

Some medical writers, impressed with the opinion that a debility of the exhalants will prevent the effusion of water, place the proximate cause exclusively in a torpor of the absorbents; but when we reflect that these vessels, from sympathy and contiguity, are liable to the same morbid affection, there appears no necessity for this discrimination, especially when the phenomena of this disease may be satisfactorily explained by the debility which equally affects both of these classes of vessels. Instead of preventing, a debility of the exhalants actually promotes the effusion of water, while a similar affection of the absorbents suspends their power of action. The *vis a tergo* continues to propel the fluid through the unresisting mouths of the exhalants, in the same manner as copious sweats are effused through the relaxed vessels on the surface. But when in phlegmasia and other diseases of increased action these vessels are too highly excited, effusion is equally restrained in each. This principle explains the phenomena which Dr. Quin deemed so extraordinary in the two cases which he has recorded. "Both," he remarks, "indicated by their symptoms well marked cases of hydrocephalus internus, but when examined by dissection, the blood vessels of the brain were so unusually distended, that the whole cerebrum and cerebellum resembled an anatomical preparation, in which the utmost force of injection had been employed. What is very remarkable in these cases is, that though the symptoms preceding death were so unequivocal, yet to the astonishment of those who were present, and who expected a considerable quantity of water in the cranium, none could be discovered."

If the principles assumed in this essay be correct, the discovery of water in these two cases should have excited as much astonishment, as the want of it did in Dr. Quin and his associates. It has already been noticed that the increased excitement of the exhalants does not increase their effusion,

while a similar affection of the absorbents essentialty augments their power of action. Under such circumstances therefore, no water can ever be found in the ventricles of the brain.

ART. III. *Observations on Fractures of the Femur, with an account of a new Splint.* By NATHAN SMITH, M. D. C. S. M. S. Lond. Prof. of Surgery, &c. in Yale College.

IN the treatment of fractures, the first object is to place the extremities of the fractured bone in accurate apposition. In general, this is accomplished without difficulty. It sometimes, however, happens that the muscles are so contused, or otherwise irritated, as to become morbidly rigid, and to resist a considerable degree of force, although the limb be placed in the most favourable position for the reduction. Under these circumstances, it is with some difficulty that the fractured surfaces are brought in co tact with each other. If the position of the limb be injudicious in relation to the action of the muscles, or if the force be suddenly and unequally applied, the difficulty is often insuperable. When, however, the contraction has been overcome by the necessary degree of extension, if the fracture is at all oblique, the muscles will repeat the displacement, as soon as the extending force is discontinued; consequently there is indicated the employment of a permanently extending force, a remedy which, from the difficulty that attends the employment of it, and from the want of tact in adjusting it, is exceedingly equivocal in its results, often defeating its own object, with regard to the limb, and occasioning a great deal of suffering to the patient.

The principal difficulty, then, in the treatment of fractures, is not in the manual operation of reducing the bones to their places, but in keeping them acurately there till union can be effected. This difficulty, however, does not altogether consist in the liability of the limb to be shortened by the contraction of the muscles, but also in the tendency which there is to the

other kinds of displacement. The limb, below the fracture, may assume such a position, that the axis of the inferior fragment may not coincide with that of the superior, but may make an angle with it; or the limb may rotate, so that the fractured surfaces shall not correspond. This often occurs in fractures of the thigh, from not properly supporting the foot, which, acting transversely upon the axis of the limb, operates like a lever to rotate it. Or, finally, there may be a displacement of the fractured extremities laterally, occasioned by the unequal action of the muscles, or by the limb not being equally supported.

The liability to these kinds of displacement and consequent deformity will depend, in a great measure, upon the length and weight of the limb below the fracture. It is obvious that the greater the length, the more power will the weight of the extremity have to bend the limb, and the less apt will the portion below the fracture be, to accompany the part above in those motions which it is impossible to avoid. The nature of the difficulty, in these cases, should indicate the means which are best calculated to remedy it, and hence it is obvious that the most important indication is to employ such an apparatus as shall command the whole limb, so that the part below the fracture shall preserve its proper range with that above, and in the different motions which may be necessary, that the whole shall move as one, the fragments maintaining their relative position in all respects.

Another important circumstance to be attended to is the attitude of the fractured limb, which should be such that, as much as possible, the antagonizing efforts of the flexor and extensor muscles may be made to balance each other. From the neglect of this circumstance, almost every kind of evil to the limb is liable to occur; the muscles will exert an unequal force laterally, tending to lateral displacement, the contractile force to be overcome must necessarily be greater, the application of the extending force can not be made in the direction of the axis of the broken bone, and in addition to all these,

the ease and comfort of the patient, so necessary to the healthy process of union, are greatly impaired.

Another object to be attained, is so to contrive the apparatus that the patient may be moved from place to place, or taken from one bed and laid upon another, without injuring the limb or retarding the cure; for it is no small penalty to be confined on the back for forty or fifty days.

The above are the principal indications to be kept in view. But while we attend to them, there are certain injurious circumstances to be avoided, or obviated, which might frustrate our intentions, or give the patient unnecessary pain and inconvenience. The most important of these is injurious pressure. This is often produced in two ways; and first, by the weight of the limb resting upon a small part of its under surface. This cannot be continued for any length of time, even although it rest upon a cushioned support, without producing injurious effects. The softness of the support is too often a circumstance which deceives the surgeon. A little reflection, however, must convince every one that, if the weight of the limb rest upon an inch square of surface, the effect will be the same whether it rest upon eider-down or adamant, provided the surface of the latter be accurately adapted to that of the limb. To obviate this difficulty and source of injury, the support upon which the limb rests, whatever it may be, should be so adapted to the whole under surface of the limb, as to divide the pressure as equally as possible throughout every part of it. If this be done, it will make no difference whether the support be hard or soft, the benefit of soft substances as an easy support, consisting entirely in their receiving the weight upon a greater surface, and thus dividing the pressure more equally.

The other kind of injurious pressure, which is often, I may even say generally produced upon fractured limbs, is occasioned by the application of splints and bandages immmediately to the neighbourhood of the fracture, with a view to keeping the extremities in place by means of lateral pressure. This occasions injury by the partial contact of the narrow or

flat splints bound tightly to the limb, and which, notwithstanding the compresses which are interposed, gall and chafe it in particular places. The circular bandage, by making pressure entirely around the limb, intercepts the returning blood in the veins, and causes the limb to swell below the bandage; or if the limb be equally bandaged throughout, impedes the healing process to which a free circulation is necessary, or irritates the soft parts by pressing them upon the fractured extremities, and not unfrequently, by the inflammation and ulceration which is produced, converts simple fractures into compound.

This kind of pressure is employed from a mistaken notion, which prevails too generally, that such bandaging and partial bracing of the limb contribute much to keep the bone in place. If surgeons, who are in the practice of applying bandages tightly around fractured limbs, would take the trouble to investigate the subject, I think they would perceive that such practice can do nothing but mischief. They cannot be applied sufficiently tight to prevent the shortening of the muscles without interrupting the circulation, and it is doubtful whether *any* degree of tightness would aid in the least, to affect this object; nor can they contribute at all to prevent displacement of the extremities, if the limb below the fracture is moved from its proper position, or if the limb above the fracture is, by the motions of the body, moved out of its relative and natural position. If, in a case of compound fracture, in which the ends of the bone are in sight, or in which they can be touched by the finger, the surgeon will take hold of the limb below the fracture, while he keeps his finger on the fractured ends of the bone; he will find that, by moving the limb into its proper relative situation with the limb above the fracture, the bones will readily come into apposition; but if he attempts to bring the ends of the bones into apposition by pressing them down with his fingers, he will find it utterly impossible to do it, with any force, unless he move the limb below the fracture with the other hand. The weight of the limb is acting against him at the end of a

lever which gives it an infinite advantage. For this reason no pressure which the limb can bear without destruction will prevent the ends of the bones from being displaced, if the limb is moved out of its proper position. This mistaken idea of the utility of bandages in maintaining the natural form of the limb, and the necessity of them to attach the splints which are commonly used, has led to an unremitted employment of them, which could not fail to be exceedingly injurious, even were they capable for a time of effecting the objects for which they are intended. It is too generally presumed that, when a fractured limb has been once dressed, or set, as it is vulgarly expressed, it must remain perfectly fixed till the bones have united; and as it receives its support from the splints which are commonly employed chiefly through the medium of the bandages, there is generally a great unwillingness to relax the support by loosening them; nor indeed can it be done, as the apparatus is usually applied, without occasioning more or less displacement. There is often, however, a more insidious and much more fatal mischief resulting from this apprehension of relaxing the supports of the limb. The unreasonable fear of unbinding it, thus enveloped as it is in the dressings, for the purpose of noticing its condition, is a timidity which has proved the destruction of many limbs and some lives, and almost always occasions excruciating torment to the patient. It is rare that bandages encircling the limb are not, either at first applied too tightly, or become so, soon after their application, by the swelling of the limb. To the surgeon a part of the dressings may appear sufficiently loose, while by the unequal swelling of the limb, other parts may occasion and conceal a great deal of mischief.

It is unnecessary that I should speak of the great variety of methods which have been employed to maintain the reduction of fractures of the thigh, in order to point out in them the deficiencies which I have spoken of above. Observation and reflection will, as I think, convince every one that the difficulties which I have enumerated are completely obviated by none of them, and that they are for the most part deficient in

the general principles which govern their application. I would particularly, however, call the attention of my readers to that which is now used almost exclusively by scientific surgeons, and which, with its modifications, appears to be regarded, though acknowledged very often to fail, as the *ne plus ultra* of inventions for this particular purpose. I mean the method of Desault. This is so familiarly known that I will not attempt to describe it minutely. The principal object, which this apparatus is intended to effect, is permanent extension. One long splint is essential to it. This, in the original apparatus of Desault, was a flat piece of wood applied by bandages to the outside of the limb, with compresses intervening, extending above the hip and below the foot. Oblique bands were cast between the thighs and over the extremity of the splint, which thus effected the counter extension, while extension was made by passing bands from the ankle and foot to the lower extremity. Short splints were also bandaged to the thigh, and the whole was closely enveloped in dressings. The patient was of course confined to his back, and the limb was made to rest upon cushions throughout its whole length. The above apparatus has been ingeniously modified by Drs. Physick and Hartshorne. The former gentleman extended the superior extremity of the long splint to the axilla, in the form of a crutch, with a view to relieve the perineum from the galling pressure of the counter-extending band; the latter, by employing two long splints, divided the resistance more equally around the base of the limb.

The first objection, which occurs to every variety of this apparatus, is the attitude of the limb, by which an unequal degree of tension is produced in the flexors and extensors. It is obvious that, when the thigh is extended upon the pelvis, and the leg upon the thigh, all the extensors have their utmost degree of relaxation, while the flexors have a corresponding degree of tension. It is said, indeed, that, although this posture is at first painful to the patient as being unusual, yet, when the extension has been continued for a time, the contraction of the muscles is overcome, and he ceases to com-

plain. This, however, is only an evidence of what mechanica force can effect, and that the muscles, after the extension has been continued for some time, become paralysed, and their sensibility obtunded. It does not prove that the two classes of muscles, which are thus unequally stretched, exert an equal degree of force obliquely upon the bone; for although their vital contractility may be suspended, we know that the contractility of texture increases with the increased degree of extension, so that although the sensations of the patient do not indicate it, yet it is absolutely certain that an effort is constantly making by the muscles to displace laterally the bones to which they are attached. It is obvious also, that a greater degree of force will be necessary to give the limb its natural length, than if the muscles are in harmonious relation with each other.

A little reflection must also convince us that, under these circumstances, it is impossible to make the extension precisely in the direction of the axis of the thigh bone, for the force which is applied to the limb below the fracture, is communicated to the part which is above, wholly through the medium of the muscles, and this wil chiefly be done by those which are the most tense. These will be drawn into the line of direction, in which the force acts, while the bone, not being equally supported on the opposite side, will be crowded from it. The more nearly the muscles antagonise each other, the more nearly will the extension be made in the direction of the axis of the bone, and *vice versa*.

Another objection to this apparatus is, that the support which it receives from beneath, although it rest upon cushions, is, for reasons mentioned above, necessarily confined to a small part of the surface, and must occasion pressure more or less injurious. Another great inconvenience to the limb and to the patient, arises from the support not constituting a part of the apparatus attached to the limb, and consequently not moving with it, in the different unavoidable motions.

The remarks, which were made upon the pressure of flat, straight splints, and circular bandages, are applicable to this method.

The apparatus which I have used for several years past, was designed to answer the general indications of which I have spoken, and was the result of long experience of the difficulties which attend the treatment of fractures generally, and particularly those of the thigh. It consists of two thin broad pieces of wood,* so warped as that the concavity of one shall correspond to the convexity of the under surface of the thigh, and the other to that of the leg. The lower extremity of the thigh piece and the upper extremity of that of the leg, are jointed together. This is done by paring out the margin of each of them, in the middle, so as to make them deeply concave. The projecting corners of the extremities, which are thus produced, are applied to each other, so that those of the thigh piece embrace and overlap those of the leg piece, and each pair being fastened together by a pin, performing the office of a pivot, a perfect hinge is produced, which admits of no other motion but flexion and extension. The superior margin of the thigh piece is then pared away, so as to adapt it to the shape of the pelvis against which its circumference rests. Where it presses upon the pubis and the tuber of the ischium, as it may be made to do, it should be bordered with soft leather, and stuffed. The leg piece is to be made longer and larger than the leg, and as its concavity cannot be exactly adapted to the convexity of the calf of the leg, this part of the limb is to be slung in the splint, by means of strips of cloth, or leather, which pass across it and hang loosely into its concavity, being attached to one side of the splint by tacks, and on the other by hooks or buckles, which will admit of their being tightened or loosened, as may be necessary, without disturbing the limb. The circumference of the thigh piece is to be a little less at the inferior than at the superior extremity, to adapt it to the tapering shape of the limb. A strap, passing from the upper extremity of the thigh piece to the lower ex-

* Bass is that which I have employed, as being more flexible, and less liable to split than almost any other.

tremity of that of the leg, will enable the surgeon to fix it at any angle that he pleases.

In applying it, there may be laid along under the whole splint bands of firm cloth, long enough to embrace the splint and the limb. A broad linen cloth may be laid in the thigh piece. The limb is then to be carefully laid in the splint, the size of the one having been adapted to that of the other by measuring the sound limb; the linen cloth may be folded over the limb, and the whole splint then secured to it by overlapping and pinning the bands along its whole length from the hip to the ankle. As the pieces of the splint are flexible, they will be made by the bands to embrace the limb firmly enough, although they may not have been precisely adapted in size. In most instances, in which the limb has been thus dressed, almost every source of irritation being avoided, and the attitude natural and easy to the muscles, I have not found it necessary to use permanent extension. I am confident that the necessity for its use is often occasioned by the apparatus itself which is employed to effect it. Where, however, the fracture is very oblique, and the muscles are disposed to contract and shorten the limb, I have employed a mode of extension, which can be graduated to any degree of force, and which may always be made in the direction of the axis of the thigh bone. It is accomplished by lacing a soft band of leather round the leg, just below the knee, and to this attaching a cord, which is carried in the direction of the bone over a pully in a stand nailed to the foot of the bed, and which may be lowered or raised at pleasure. To the end of the cord is attached a weight, equal to the necessity of the case. The weight of the body makes the counter-extension, which may be increased, if necessary, by raising a little the foot of the bed.

The reader will readily perceive that, by this apparatus, all the indications which I have spoken of above are intended to be answered. The limb may be placed at any angle, which the muscles may require, without at all disturbing the fracture. It is completely protected from hurtful pressure, as it rests upon the whole surface of its semi-circumference, and as it

is no where girt by bandages, being protected from their unequal pressure by the splint, suffering them to touch it only on its upper surface. Along the angles of the splint and bandage, there is no pressure at all, so that the blood returns with perfect freedom. The weight of the leg being perfectly commanded by the lower piece, and the limb easily fixed in any position, its control over the fractured extremities is completely obviated. The splint being light, and the whole of it attached to the limb, and the support being the splint itself, there is no difficulty in removing the whole limb as one, or in transferring the patient from one bed to another. The bandages may be at any time relaxed without the least danger of disturbing the fracture, they being only necessary to secure the limb when it or the body moves. It is to be particularly noticed, as one of the excellencies of this method, that the weight of the limb itself, and the re-action of the hollow splint in which it is lodged, constitute all the force which, under ordinary circumstances, is necessary to maintain the reduction. It is particularly adapted to compound fractures, which may be examined and dressed without in the least disturbing the limb, and even although the wound be on the under surface, by cutting away a portion of the splint opposite to it. The few words which are necessary to describe this splint, are a sufficient evidence of its simplicity, almost any person can construct it in a very short time. The objections of complication and expense, therefore, which prevent the general use of some others, cannot be made to this. I do not, however, rely solely upon the theoretical principles which indicate its use. Its present form is the result of twenty years' extensive experience in the employment of some modification of it, and I never have seen sufficient reason to induce me to abandon it for any other.

Art. IV. *Observations on the Prenanthes Altissima.* By Dr. James Hubble, of Westchester, New-York.

Empiricism, though pregnant with many evils, has nevertheless been productive of some benefits to the science of medicine. It is by this, that the medicinal powers of many remediate agents have been brought under the control of this ennobling science. It is well known that some of the most important articles of the materia medica were long used as domestic remedies, before they attracted the attention of regular practitioners. In proof of this, we need only refer to the use of *vaccina* among the inhabitants of Dorset and other counties of England, until it was introduced to public attention by the illustrious and philanthropic Jenner. It is therefore incumbent on every one who is anxious for the promotion of medical science, to avail himself of the advantages which occasionally result from empirical practice; for by this means many important remedies may yet be discovered, and consequently the resources for the relief and mitigation of suffering humanity increased.

With these views, my attention has been directed to a plant, which is universally believed by the inhabitants of certain sections of our country to possess the power of eliminating or counteracting the *virus* produced by the bite of the rattlesnake (*crotalus horridus* of Lin.). This plant I have found to be the *prenanthes altissima* of Linnæus. It is called by the common people, snake-weed, which name it has probably received from its reputed virtues in curing the bite of that animal. I shall content myself with merely giving a botanical description of the plant, and stating some stubborn facts in reference to its medicinal properties, leaving its further investigation to those who may have an opportunity of assaying it by the touchstone of well-conducted experiments.

The prenanthes altissima is a perennial syngenesious plant, of the order polygamia æqualis. *Generic character:* Calyx calycled, cylindric; receptacle naked, egret simple, flowers

from five to twenty, ligulate. *Specific character:* Stem herbaceous, simple, a little spotted, racemes axillary, flowers pendulous, calyx about five-flowered; leaves decurrent on the petiole, angled, denticulate, margin scabrous, radical and lower cauline ones deltoid, with the two lobes at the base projecting a little backwards, middle and upper cauline ones ovate. The flowers are yellowish, and appear in September. The whole plant is lactescent, growing to the height of three or four feet, in a damp and shady soil, mostly along rivulets.

The following, among many other cases that might be adduced, are submitted as proofs of its medicinal efficacy.

G. W. S., aged about fourteen, was bitten by a rattlesnake under the malleolus externus. As the prenanthes could not be immediately obtained, the most excruciating pain, with great swelling and discoloration, supervened, attended with nausea, vomiting of bilious matter, and remarkable prostration of strength. By an external and internal administration of the prenanthes, relief was promptly obtained, with a subsidence of the pain, tumefaction, and discoloration.

J. R., aged about twenty-five, on making an attempt to draw a rattlesnake from a stone wall, was bitten on the outside of the hand, between the thumb and fore-finger. The usual symptoms attending the bite of this venomous reptile began to arise, but were immediately arrested by an opportune application of the prenanthes, applied externally to the wound, and given internally in the form of a strong infusion.

J. O., aged thirty, was bitten by a rattlesnake on the heel, which was soon followed by chills, nausea, vomiting of bilious matter, with great prostration, swelling of the lower extremity, violent pain, and livid spots on the skin. In this case a ligature had been passed around the thigh, in order to prevent the introduction of the *virus* into the system. After the lapse of a few hours, the prenanthes was applied with the happiest effects.

The last case that I shall mention, is that of a dog, which was bitten by a rattlesnake. A few minutes after being bitten, the animal evinced signs of the most excruciating distress. These were inability to walk or stand, moaning, and violent

jactitation. The owner, not willing to lose his favourite menial, made an external application of the prenanthes to the bitten part, and compelled him to swallow a portion of the infusion. To his great satisfaction the animal soon rejoined him in the chase, free from every vestige of disease.

These cases I have collected from inhabitants of unquestionable veracity, and are capable of being substantiated in such a manner as to demand credence. Although they are destitute of that minuteness of detail which is expected from a physician in attendance, they are nevertheless sufficient to prove the three following facts:—1st. That a bite was inflicted. 2d. That painful consequences arose. 3d. That these were removed by the prenanthes, uncombined with any other agent.

The mode of administration is simply this: If the bite be recent, an external application of the stalks and leaves bruised together is considered sufficient; but if constitutional symptoms have supervened, in addition to the above external application, a strong infusion of the plant is considered necessary to be taken freely.

In conclusion, I would remark, that so implicitly do the inhabitants of certain sections of our country rely on the virtues of the plant under consideration, that although several instances of the bite of this venomous reptile have occurred, regular practitioners have never been called upon.

From the sensible properties of the plant, we would *a priori* suppose it to be an inefficient article. But these speculations must give way to matters of fact, especially when we consider that ergot, one of the most insipid and inodorous of articles, is nevertheless capable of producing the most violent and irresistible uterine contractions conceivable.

These remarks are offered with a view of introducing the plant to the attention of those who may have an opportunity of further investigating its properties. If it be found to possess the virtues ascribed to it, let them be known, and duly appreciated; but if it be found devoid of these qualities, let it, like many others of ephemeral reputation that have gone before it, be consigned to the abyss of oblivion.

Art. V. *On the Employment of Calomel and Opium in Dysentery.* By Dr. Moore Hoit, of Peekskill, New-York.

None of the articles of the materia medica have occasioned more variance among physicians, than the mercurial preparations generally; and calomel, as standing at the head of the list, has been the most prominent subject for commendation and reproach. Its enemies have been decided in their opposition, and its friends have used it with a degree of caution derogatory to its generous qualities, and in a manner well calculated to furnish its opponents with materials for warfare. But without entering into any discussion respecting the qualities of calomel, it is sufficient for my purpose to know that it may be taken into the stomach with impunity; that it produces no injurious effect upon that organ, or upon the intestinal canal generally; and that when its peculiar effects appear, they are developed in remote parts of the system, and are, in the majority of cases, the consequences of repeated prescription, and not of the quantity administered. These being the "facts in the case," it has always been a matter of surprise to me, that calomel should be estimated an article so dangerous as to render it necessary that its dose should be carefully regulated, and so restrained in quantity, that none of its qualities but those we are most anxious to avoid, should be allowed to manifest themselves. Sometimes it is given in minute doses, for no other reason, that I can discover, but to render febrile irritation more acute; occasionally in a more respectable quantity, but so politely shown through the journey by an officious dose of jalap or rhubarb, that time is not allowed for even a passing salute to the different organs.

For more than five years I have been in the practice of prescribing calomel in large doses, in some of the diseases of the alimentary canal, and "collatitious viscera:" but my design at present is merely to notice the beneficial results that have been witnessed in about twenty well marked cases of dysentery, which have come under my treatment during a period of four years.

Dysentery has not prevailed as an epidemic in my neighbourhood within the time above-mentioned; but although sporadic cases seldom assume the malignancy of the epidemic character, those instances of the disease which I have thought worthy of notice, on account of their successful treatment, have commenced with a cold stage, followed by a hot and sometimes a dry state of the skin, furred tongue, thirst, tormina, tenesmus, and frequent discharges of mucus, and, in most cases, blood. The treatment in these cases has not been much varied; uniform success has encouraged me to make almost uniform prescriptions. In some instances, I have given an emetic of from 20 to 30 grs. of ipecac. alone, and have had no cause to regret it, although I never observed it to give any permanent check to the disease. In some cases apparently demanding it, I have drawn blood; but in every case, I have placed my reliance upon large doses of calomel, or calomel and opium. I was induced to give large doses of calomel in this disease, from the success which had attended the practice in cholera, at a time when I was opposed to the employment of opium during the early stage of dysentery, or until after the administration of cathartics: but experience has convinced me of the error of withholding opium when united with calomel, and still more completely of the injudicious practice of exciting or irritating the inflamed mucous membrane by such articles as are commonly used for that purpose. It cannot be contended that those articles have the least tendency to *change* the state of the local disease; they merely remove from the intestinal cavity the effects, not the cause, of the disease, and this at the expense of increasing the already morbid irritability of the suffering part. The same objection, I am confident, cannot be made by the *practitioner* to the remedy in question. The doses of calomel employed, have varied from 20 to 35 grs., and of dried opium from 1 to 2 grs. This prescription has been repeated according to the violence and pertinacity of the symptoms; slight causes have been entirely removed by one dose, others have required two, three, but never, as I recollect, more than four, generally with an

interval between each of from eight to twelve hours. A dose of castor-oil has been invariably directed after the dysenteric symptoms have subsided. In twenty cases, I have never known this practice to fail of effecting a cure, nor salivation to ensue but in one instance.

I offer the following case as a specimen of my practice; for the second, I am indebted to my friend, Dr. James Fountain.

August 7th. 9 o'clock A. M. Called to Mrs. A. V., of a slender habit, and rather predisposed to pulmonic affections; nursing her child of about four months. Found her with considerable prostration of strength; thirst; skin hot and moist; severe tenesmus, and trifling evacuations of mucus; much nausea, but no vomiting. These symptoms were of four or five hours' existence, and had succeeded a diarrhœa of a few days' standing. Prescribed an emetic of ipecac. In the evening, no relief from the dysenteric symptoms. Then prescribed about 20 grs. calomel combined with 1 gr. opium; and an enema of starch, to contain ʒ tinct. opii. within two hours, should there not then be effectual relief from the tenesmus.

8th. A. M. During the first part of the night she remained free from pain, and the enema was not administered; but the symptoms had now returned. Prescribed 25 grs. of calomel and 1½ opium.

Evening. Has passed the day free from pain or discharge; likewise an abatement from thirst, &c. Ordered an ounce of castor-oil.

9th. A. M. Discharges of mucus, with some blood; but little pain. Gave 20 grs. of calomel. In the course of this day the dysenteric symptoms subsided entirely. The cathartic operation of the calomel was marked by dejections, consisting almost entirely of the natural secretion of the liver. A slight diarrhœa rather retarded convalescence, as I was informed a few days after, but which readily yielded to nourishing diet, and a moderate quantity of port wine.

CASE II.

J. D., aged sixty-five, of a sanguine temperament, and rather intemperate habit, while coming up the Hudson, slept on the deck of a steam-boat during the greater part of the night of the 12th August. On the 13th he was seized with rigors, succeeded by high excitement, severe griping pain in the bowels, constant tenesmus, with a discharge of blood and slime only. These symptoms continued without any mitigation until the 17th. Having taken no other medicine than a little rhubarb, his tenesmus was constant, and every symptom of *dysentery* was fully manifested. I prescribed immediately six powders, each containing sub. mur. hydr. 25 grs., ipecac. $1\frac{1}{2}$ grs. and opium 2 grs. One of these was to be taken every eight hours. On the 19th, I found him free from every symptom of the disease, debility excepted. The effect of the first dose was an abatement of the pain and tenesmus; after the second, he could rest in bed comfortably. His tenesmus having ceased, he had a copious dejection. His bowels continued free with two motions only in the twenty-four hours. His convalescence was rapid and uninterrupted.

ART. VI. *An account of a New Instrument for making Artificial Pupil and cutting up the Lens.* By JOHN HILLS, M.D. of South Carolina.

HAD the oculist an instrument which would invariably make an artificial pupil, it unquestionably would be a great desideratum. And if he had also an instrument which would cut up a hard lens into minute portions, and the capsule of soft ones, and thereby obviate the necessity of extraction, it would be of infinite importance in his art. The writer of this article flatters himself that he has discovered an instrument capable of effecting both these purposes: the plan is respectfully submitted to public examination.

Finding the usual instrument (Sir W. Adams's iris

knife) for artificial pupil so often fail, and that in all cases, even the most favourable, it was difficult to effect any thing with it, he was induced to invent something which could be used with more facility and success. The instrument under consideration is a species of scissors. Though a great variety of scissors are in use for operating on the eyes, there are none which act precisely on the same principle as these.

They are five inches in length, the blades near half an inch, have four cutting edges, are curved at their points, and very little larger than the common couching needle; they have a long and short handle, and open with a spring, though it is immaterial as to the effect of the instrument, what kind of handles are attached to the blades, those of common scissors answering quite as well. They must be made nearly round at the root, so that they can be turned in the eye with ease.

It is necessary to have three sets of different length of blade, which will answer for eyes of all sizes, make an artificial pupil in any part of the iris, and cut up the hardest lens, unless it be ossified, which is a very rare occurrence.

One of the blades ought to be about $\frac{1}{20}$ of an inch longer than the other, in order to make the puncture with greater ease, though if they be delicately made and in nice coaptation, they can be readily introduced without it, or the puncture may be ...ade with Cheselden's knife, and then the scissors introduced afterwards with great ease. They are to be introduced in the same manner as the couching needle, and then pushed in up to the rivet, so that it may come exactly even with the orifice in the sclerotica (see plate); then it is obvious, constructed as these are, that they may be opened and shut hundreds of times without lacerating or contusing that coat; when thus introduced, the points are turned forward and opened (see plate); the points are then to be brought forward to the iris where it is intended to make the pupil, which is effected by carrying back the handles. Or

if the operator chooses, he can pierce the iris with one blade, and then shut them, which will cut all that portion between them. This is effected by carrying the points obliquely upwards or downwards, as the transparent portion of the cornea may be situated, which, of course, is the place for making an opening in the iris. When the iris is very near, or even in contact with the cornea, as is sometimes the case, the operator must hitch the point of one of the blades into it, and turn the point back, and at the same time push it through the iris. When the blade has pierced $\frac{1}{12}$ or $\frac{1}{16}$ of an inch, shut the scissors, and so proceed until the opening is as large as required. This is a very superior advantage which the instrument has over the knife; for being curved, the operator can, after catching it on the point, draw the iris back easy to its natural position, by slightly turning the point back, which is done by turning the instrument in his fingers, and at the same time pierce and cut it. In attempting to do this with the knife, it is very liable to pierce the cornea, and indeed it is generally impracticable to effect any thing; the patient is therefore abandoned to his fate. A regular comparison of the instruments will not be gone through, as it is presumed that the advantages of the one over the other can be seen at a glance, by any one at all conversant with ophthalmic surgery.

The lens is cut up by turning the instrument in various directions, at the same time opening and shutting it, care being taken not to wound the iris. The most proper way, however, to cut up a hard lens, is to introduce the scissors as before directed, and to carry them back to the posterior part and centre of the lens. The points are then to be brought forward and gently introduced into it, after which they must be opened: having cutting edges on their external sides, they will cut their way out; then shut, introduce, and open as before. In this way the hardest lens is easily divided into halves, and these are readily embraced by the blades, and cut into small portions or particles, which may be suffered to remain in situ. A hard lens, therefore, becomes in this way

converted into a state analogous to that of a soft one, consequently absorption follows, and extraction is rendered unnecessary.

ART. VII. *Account of a Disease which prevailed in the New-York Penitentiary, during the months of September, October, and November*, 1825; *in a Letter to the Editors*. By THEODORE F. KING, House Surgeon to the Penitentiary.

I TRANSMIT for publication in your Journal, a brief notice of a disease which has prevailed, during the last three months, in the Penitentiary, and which has appeared to me both novel and interesting, no less from the symptoms which characterized it, than from the cause which is supposed to have produced it. Without presuming to give to it any particular name, I shall briefly detail such facts as may enable you to form a judgment concerning its real character.

The first case that arrested my attention, was that of a girl, who complained of an unusual degree of soreness in one of her legs. On examination, I found on the calf of her right leg a spot about two inches square, discoloured, and exceedingly painful to the touch. Considering it as nothing more than a common bruise, I prescribed some ordinary rubefacient. On the succeeding day, I found that no relief had been obtained; that she had been restless and wakeful all night; and she now complained of pains shooting up the thigh. Opium was given during the day and at night. No sleep was however procured; and on visiting her the next day, she informed me that she had lost entirely the use of that leg. From the singularity of this case, I was now induced to inquire whether any others of the females were similarly affected. On interrogating them, I was answered in the negative; but on examining them, there were observed small purple spots at the root of the nail of the great toe, in some, and in others about the malleolus internus. The number thus affected was sixteen. None of them were conscious of being

at all indisposed, and indeed no symptoms of any derangement of the system were present. In a short time they began to complain of pain in the legs, similar to that of the patient already mentioned. Considering it to arise from a torpor of the extreme vessels, owing to their confined life, I prescribed stimulating applications to the part, and directed the following combination to be taken internally, three times a day:

Tinct. cantharides,	-	gtt. xv.
Tinct. opii,	- -	gtt. x.
Aq. ammoniæ,	- -	gtt. xv.

At the same time I permitted them to walk in the yard attached to the Penitentiary. Under this treatment they obtained some ease. The disease, however, was not arrested, and the patient first attacked now began to complain of pains in the stomach and bowels, resembling those of colic. Tincture of opium was freely given, without arresting the pain, until the next morning, when she said that it had entirely left her, and expressed the belief that she was getting well. On the succeeding day she died in convulsions, which lasted about fifteen minutes.

I now directed an examination among the men, eleven of whom I found with similar appearances on their extremities. Alarmed at the progress of the disease, I endeavoured to ascertain what could be the cause producing it: and with this view, learnt from the keeper that the prisoners had been in the constant habit of using rye bread, the grain of which, he informed me, contained a much larger quantity of spurred rye than he had ever seen, but that, as he considered it perfectly innocent, he had not taken the trouble to separate it. As the flour was ground at the tread-mill attached to the Penitentiary, I examined the rye, and found it to contain very large quantities of the ergot. The house had been upon the use of this flour about three or four weeks before the disease made its appearance. From the effects which are known to have been produced by the use of the ergot, I thought it probable that the present cases of disease might safely be attributed to this cause. The use of the flour was accordingly immediately

discontinued; and although during the fortnight after this two or three cases occurred, after that it totally disappeared.

The usual course of the disease was as follows:—Small discoloured livid spots first made their appearance on one or both of the lower extremities, generally about the foot, unattended at first by any local pain or uneasiness, or any general indisposition. After an interval of a few days, these spots would become more numerous, and extend up to the knee. They would now become painful, and in some cases the patient would lose entirely the use of the lower extremities. During the whole of the disease, the pulse was feeble, and generally about 100 per minute. The face usually had a peculiar livid appearance, by which the patients could, in many instances, at first sight be recognised. No unusual heat of skin was present; and the tongue was slightly coated, and very flabby. In several cases there was considerable sordes about the mouth, and in two or three hemorrhage from the gums. The bowels were generally regular; in no case was there diarrhœa present. The urine also appeared natural in quantity and quality. The spirits of the patients did not seem at all affected, and their appetites continued good throughout the whole course of the disorder. In all the fatal cases, death was preceded by severe colicky pains in the bowels. The usual duration of the disease was about four weeks. The women and the old people seemed most affected by the disease. Of thirty-two cases, the whole number that occurred, ten proved fatal. The following is the only dissection which was made; for the particulars I am indebted to the House Physician, Dr. James H. Rogers.

The subject, upon examination, presented an unusual deposition of adipose substance upon the inner parietes of the abdomen. The greater epiploon, however, was shrivelled, and very dark. The liver was healthy, and the gall-bladder full of bile. The uropoietic viscera were sound, and the kidneys secreted their due proportion of urine. The intestines were found studded with dark livid spots, which presented themselves in greater abundance upon the larger intestines.

traversing the transverse arch of the colon to its descending portion. The sigmoid flexure and the rectum were studded with one continued series of dots. A portion of the duodenum was likewise diseased. The stomach appeared inflamed, with a discoloration upon the under and larger portion. The pancreas and spleen presented nothing unnatural.

The subject examined was a female; and, from a knowledge of the supposed cause producing its specific action upon the uterus, I was led more particularly to examine that organ. It appeared quite natural, of its ordinary size, and perfectly healthy.

In treating the patients, bark and wine, carbonate of ammonia, and nitrous vinegar, were the remedies principally used. Bark and wine seemed to be the most efficacious. Opium was given as circumstances required, to alleviate pain and procure sleep.

In conclusion, it may be proper to state, that about thirty of the females were at this time affected with fluor albus, which required, for their cure, a long persistence in the use of tonic remedies.

Art. VIII. *Account of a Disease now prevailing at Puerto Cabello, in the Intendancy of Venezuela, Colombia.* By J. H. C. Miller, M. B. of the Colombian Navy.

Medical reports, and more especially relative to febrile diseases, have been so abundant within the last few years, that it would appear superfluous to add to the number. Of an ordinary fever we have before us instances of almost every morbid process, and every system of cure. The disorder of which I propose to give some account, however, is not merely very destructive, but, I think, presents some new features, some new coincidences in inflammations or fever, as it shall be thought proper to distinguish it, and is therefore entitled to particular notice.

The affection first appeared about the first of September in Venezuela, in the interior. From what I understand, the

persons about the mine now opening in the province of Caraboba, first began to be sickly, and soon after many of the Creoles were taken. After some time raging in the interior, scattering cases were discovered in the city of Puerto Cabello. The summer in this Intendancy generally, had been unusually dry till the beginning of the month, when, in the city, a season of several days of rain occurred, giving rise to a sudden change of temperature in the air; this, however, did not last long; two or three weeks of drought succeeded, accompanied by less than usual of the sea breeze. But if this was the cause of the disorder here, what gave rise to it far up the country? I thought proper to mention it. About the middle of this month as I said before, it began in the city among some persons from the interior, who went off directly, and next among the Creoles of Indian blood who resided in the place. But not till the first of October was it noticed much by physicians. About this time several deaths took place, which aroused the public attention. A Spanish gentleman just arrived, and a Major Schofield, died suddenly. A medical gentleman thought proper to raise a report of the disease of which they died, being the yellow fever: this idea, the government party seemed to adopt, for the bodies were ordered out to sea for burial. A great alarm was excited. The disease continued to increase, and bore down all opposition, carrying off all whom it attacked, with the exception of the patients of our practitioner. Thus I have given a history of the commencement of the disease as particularly as I could, for I did not arrive there myself till about the first of November, having been, during the summer, on a cruise on the coast of Europe.

Our crew were uncommonly healthy when we arrived, and yet in one week seven or eight were down with the affection, though of the first cases fortunately none died.

I was now ordered to remain on shore, and know no more of them. Five days after my arrival I was myself taken down by the disease, and confined a week, and only escaped a

long confinement by severe handling and mercury, under the judicious hands of Dr. Pidgeon.

I attended several persons, Creoles of the country, and observed a singular uniformity in them all. This I shall hereafter describe. A gentleman from Bogota, in the Intendancy of Granada, died on my hands forty-five hours from his attack; he, six days before, arrived healthy: a servant in the same family died the same day; and an Indian woman two days after, all in the same state.

Mr. George W. Mix, a brother of Lieut. Mix of the U. S. Navy, whom I was called to see in the last stage by his attending physician, Dr. Morrison, was the next marked case of this affection in my hands: he died after five days' sickness, during which time nothing disturbed the progress of the fatality of his disorder: he went off like an automaton, and breathed his last in a slumber, sensible of approaching dissolution.

I shall now proceed to describe the disorder itself, with reference to its diagnostics, as they occurred to me, with the several modes of treatment, and then lay before the reader the hasty dissection of a pointed case, making but few comments on any part of the subject. But, first, I will remark of the general opinion of the disease, that it is nothing but a fever—the Spanish practitioners giving it no more distinctive appellation than merely *calentura* (fever), and the foreign faculty terming it *typhus gravior*. But I think neither proper, from a circumstance I shall hereafter relate.

The patients, then, are primarily affected in two different ways; and, generally speaking, the foreigners and Creoles just arrived from sea, are to be distinguished from the Creoles and foreigners acclimated to the country, and accustomed to Spanish habits. And here I may observe that the disorder, though more violent to the patients, and more inflammatory, is nevertheless less fatal to those of the first class; and this is the more remarkable, as it is directly contrary to all disorders of hot climates, hitherto, that foreigners should escape disorders of the bilious and depraved habits where even the natives suffered.

One association of their symptoms is that of the bilious remittents in the southern part of the United States, varying sometimes by inclining to a nervous state, and sometimes to inflammations of the chylopoietic viscera and the brain. The smaller intestines, in the latter cases, are particularly liable. And in the case of an English sailor, belonging to the schooner Reprisalia, his first state was succeeded by a great degree of atony and loss of excitability; a morbid excitement of a very low order came on, which ended in a vomiting and purging of a passive and at last involuntary kind. He was restless, and sometimes a little wild, but complained of no pain whatever, even in the stomach, when he was discharging every two minutes, one way or the other, his food and medicines perfectly unchanged in quality, with a great quantity of almost putrid blood. This case, I am sure, be the general disorder what it may, is a sister case of Allen's, or in other words, a disorder of the spleen, with a species of erysipelatous inflammation. I almost forgot to mention, that from the change of the disease to a state of debility, medicine took no effect on him, and his bowels could never be wrought on, though the discharges were so frequent without it. In another case (Hicks, acclimated) the first stage lasted two days, and was followed by the loss of all action in the extremities, and yet by morbid sensibility at the stomach: it retained nothing; he had constant retching, and screamed incessantly of pain in the epigastric region. Blisters upon the region of the stomach and upon the inside of the legs, restored the equilibrium in some measure, and carried off his increasing debility; and soon after laxatives, opium, and spts. nitre, perfected his cure.

The second order of the disorder commences without much inflammation, though the patients complain always of violent pains from the beginning, and with a great oppression of spirits. These pains are often seated in the lumbar region, and shooting from thence to the scrobiculus cordis; at other times higher in the spine or scapulæ, fixed or running to the left breast. At one time I observed pain in the region of the liver, and about the shoulder-blades, with other symptoms,

which led me to expect an inflammation of that viscus; but I was mistaken, for it terminated as usual in a typhoid debility: and in the case of Allen, I had, at first, pain only in the head, approaching nearly to frenzy. Tounder, an officer on board the Eagle, became absolutely so, and in that state walked overboard and drowned himself. In all cases the pulse is low, yet hard and thready, varying with the degrees of debility at first, and some have from the beginning none at all at the wrist; and even in its hardest, fullest states, there is something in the concurrent diagnosis which teaches us decidedly to avoid the lancet, though I have sometimes ventured myself the experiment of venesection in bringing forward the action of the arterial system; yet I must say, never did it result to my satisfaction. To this I was led by practice several years since, where, in the first stage of synochus, I was enabled to render an insidious, low, hard pulse, full and open by it, and often obviate a succeeding stage of typhus mitior. In the two cases, a want of radical vigor, I think, constitutes the reason of its not always succeeding, which is only to be known by discovering where the mind is impaired; whether the natural motions are vigorous; and above all, whether this character of the pulsation is hard and dead, or thready, and rebounding under the finger. So much for my experience.

Some were gone and past recovery from the beginning; such had soft, relaxed skins, with a disposition to a clammy perspiration. This was the first state of Mr. Tress, brother of Dr. Tress of Philadelphia, who have both died there this autumn of the disorder. He never was in the way of cure from the first moment of his complaining. In other cases, the skins were dry and parched, and the patients thirsty withal; yet after being once briskly evacuated, they came suddenly to the preceding state of debility, so perfectly that you would be perplexed to tell in which of the two ways the patient had become so: and bark, camphor, and wine, with less evacuation of the bowels, did no better; for this practice only preserved the inflammatory stage a little longer, but did not prevent its ultimately supervening. I do not know one instance among

the most active cases, where the first stage proved difficult or obstinate; on the contrary, they all ran into a typhoid way, if the term is reconcileable to our sense of the disorder. The muscular structure more especially became flabby and pale; the eyes lost their significancy, and acquired an unmeaning stare; the tongue, in the beginning, clean but chapped, and having a trembling about the edges, which increased as the disease advanced, when, as the debility became predominant, the colour became brown, and was covered with a yellowish white exsiccated mucus; the matter, if any, about the teeth and gums tended to putrescency, and smelt badly; and, if ulcers existed, they took on an ill-conditioned, and, as I would choose to say, an erysipelatous state. If they discharged any blood, as was my own case, and one or two more (by the nostrils), it consisted of bloody water, or serous mixture, rather than the due proportions of healthy blood; though I must say I never paid so much attention as I should have done, had I from the beginning designed to make this communication.

With regard to the various practice adopted by physicians, but little can be said, because nothing afforded any cure except a mercurial course. Yet some—among whom I hope the Creole practitioners make the greatest number—being little versed in the varieties of febrile disease, and inasmuch as the diseases of this class in this region are all much of one order, and never vary greatly from what are called malignant bilious fevers in the United States, and which will generally yield to a purgative and sudorific—I say their practice is uniform, and consists principally of laxatives, as ol. ricin., senna, or neutral salts, ptisans, and diet-drinks. I am not jesting in this description, nor am I prejudiced against the Creole physicians; for in regard to the latter point, their studies are limited, and therefore they cannot be expected to do much, being principally taught at the schools in the country, where the superstition against dissection still prevails in its full extent, and but few of our best books have any translation in Spanish. Besides, the interior of this country is very healthy, there being but

few diseases except mild fevers, catarrhs, pleurisies, and peripneumonies. And Puerto Cabello is ordinarily of the same constitution; though the hospitals, the army and navy, are beginning to exhibit some traits of science in a medical way.

Another system of practice is the antiphlogistic one, varied by laying the lancet aside, and laying much stress on purgatives. But this has not been so successful as could be wished. The strength of the patient fails too soon, and the inflammatory stage indicating antiphlogistic measures, is proportionably very short: six or nine hours being all-essential to a cure; and in the more directly typhoid and decided attacks, but few cures are effected where help is not procured in that time from the first complaint.

Thirdly, the mercurial practice. This is the present practice of most of the foreign practitioners in Colombia, as far as I know. Dr. Pidgeon, in the city, was the first who introduced it in its extent, and even now carries it farther than any other; and his success has been astonishing. He has not, to my knowledge, lost any one patient. My aim has been to bring them slightly under its influence, and principally by ung. mercur. rubbed into the region of the liver—as it was my opinion till lately, that the principle of the disease was hepatic. To these I conjoin, as circumstances permit, opium and nitric acid. Of purges I am distrustful, and therefore use after the first, nothing farther laxative than a little oil now and then; and this is my course, especially in those cases disposed to settle on the bowels, and induce there morbid action, as in Smith's (English sailor) case, and some others.

The mercury, unless well advanced before the debility supervenes, cannot be made to take any effect, which is a state hitherto incurable; and the sudden occurrence of the debility frequently renders it very difficult to have this effected. This carried off Mr. Mix. It was forward enough to render him quite easy, but could not be brought to his glands. There seems rather a paradox in the operation of mercury in this disease; for where the tendency of the debility is to produce a morbid action of the first passages, though the previous dis-

order has been the same as in cases in which it has fallen on other parts, and mercury has effected a perfect cure—yet here it has always with me proved prejudicial. I know not how this can be accounted for, otherwise than by supposing either that in the abraded state of the intestines, the corrosive quality of the medicine produces an ill-conditioned excitement, more injurious to the system of the patient, more than sufficient to counteract its curative tendency as a sialagogue ; or, perhaps the action occasioned there, according to the law, that "a greater action will predominate, nor can but one exist in the system at the same time," suspends its tendency to act on the secretory organs. Be the explanation how it may, I have laid down the fact. My anxiety to get Smith under a mercurial influence, I am sure was very injurious to him. Yet this was his *dernier resort.*

I was, on the 18th of November, ordered on board the corvette Bolivar, to proceed to New-York to join one of the new frigates building there. The Bolivar was going out for repairs, and but thirty or thirty-five men were allowed her, which was fortunate for the seamen—for having had all her medicine chest and furniture transferred to the corvette Ceres, she was not permitted to get but five or eight articles to carry her out—which, in case of sickness, was certainly deplorably destitute ; and this was the more improper, as it was evident before we left port, that her crew would be very sickly, the disorder having broken out on board, and one died, before we sailed. During the passage, the sick list included about from five to seven daily, of inflammatory disease. They were usually treated with mercurial purges in the commencement, succeeded by neutral salts ; the most vigorous, and where the symptoms indicated high arterial action, were let blood, and sometimes I applied the cold salt water bath ; others I blistered. Where debility was the leading feature, after the first purge I gave wine freely, and administered the tinc. opii and camphor, applied the warm affusion, and in the case of one sailor, when the symptoms were indicative of a bad prognosis, I gave pills, composed of extract. cinchon. and calomel. I had

two or three bad cases of dysentery on the passage, but which not falling within my scope, I pass over.

A man by the name of Allen, was attacked with a chill about nine in the evening, which had run its course, and was about leaving him, when I first saw him: his pulse was full and hard, and his eyes suffused with blood. As he was a vigorous man, and of a hot, sanguine temperament, and had been but a few days ashore in Puerto Cabello, these signs led me to suspect it to be an attack of inflammatory bilious fever, and I left him till the morning. When I called on him at seven, his fever, contrary to my expectations, had not yet any remission; the concomitant symptoms indicated high action, and he complained of insufferable pain in the head. During the day he was purged rapidly, and in the evening took neutral salts and cream of tartar. He was also blooded to the quantity of two pounds. Next morning repeated the laxative, and had cold bath, also blister to the nape of the neck. *Third day*, head easy, but pulse hard, and metastasis of pain to the region of the stomach: blister transferred to that part—drew well, but ineffectual; and powders in mean time of pulvis antim., but no perspiration. *Fourth day*, morning—strength sunk, and his extremities became suddenly cold: directed warm bath, camphor and opium; wine and water was also prescribed, but was soon abandoned, as it would not lie on his stomach. The antimonials were laid aside this morning, and powders of calomel and opium substituted in their place. Pain in the stomach and left side increased very much through the day, during which time he took fifty-two grains of calomel. At eight, saw the expression in his countenance indicative of approaching death; and, except a little warm wine and spts. nitre, ceased to disturb him with medicines. At twelve at night he died in agony. He complained seventy-six or seventy-seven hours.

Dissection. I opened him. My aim was to examine the stomach; for though he never showed distinctive symptoms of gastric inflammation and mortification there, yet so many had gone off in the same manner, from the influence appa-

rently of something operating very rapidly near the organ of digestion, that I concluded a dissection of the stomach would give some explanation of the subject. But, contrary to my expectation, that organ was sound and healthy. It was rather pale, and in one or two places of a purplish hue, as I believe, from the effects of incipient putrefaction—six hours having elapsed since his death. A small quantity of a muddy-coloured fluid was found in the cavity of the organ, which I suppose was composed of the little wine he took an hour before his death, with the contents; for however empty we suppose the stomach, I have always found more or less of a dark and dirty fluid.

I next examined the liver, and smaller intestines. These were sound and firm, except that portion of the former round the ductus communis, where a very small part of it appeared light-coloured and rotten, or rather unusually porous and brittle. The gall-bladder was full of viscid bile.

The spleen was next brought to light. And here I discovered at once the seat of the disease and the cause of death —the greater half of the organ being perfectly mortified, without any involving membrane, black and fœtid. Being somewhat a rare case, I had the curiosity to expose it to Captain Clark, and the officers of the ship who thought proper to examine it, and whose testimony is referred to.

After satisfying myself that the adjoining viscera did not partake of the disorder of the spleen, the examination was closed, for I could learn no more on this point.

To comment on this case is difficult, inasmuch as the use of the affected organ is not known. That the disorder of the spleen is the disease now prevailing in Puerto Cabello, I do not hesitate to believe. Be the attack at first and the collateral diagnostics what they may, the leading symptoms are uniform in all. And perhaps it may throw some light on the use of the viscus when I state, that it must be connected in the process of digestion; for during a disorder of it, it is the most difficult matter imaginable to affect the bowels, having in

several cases prescribed repeated doses of medicine without producing that object. The stomach also sympathises deeply in its disease, for if itself were the seat, it could not become more morbidly sensible. This is not mere nervous relation of the parts, but must arise as a direct effect of some action connected with the well-being of the stomach.

It is indeed greatly to be lamented that some practical theory of its use has not been proposed, which could throw some light on the mode of cure; but most assuredly, of sixteen uses, which, within my reading, have been ascribed to it, I look on all of them equally wide of the true one. A knowledge of its real agency, at this time, would also enable us to form some probable notions of the remote cause of the epidemic. But unfortunately, observation from henceforward and analogy are our only guides. In the cure, mercury, empirical as its use is, has hitherto generally wrought wonders, and probably will still continue to do so. Till I have something to teach me better, either from my own observation or that of others, I shall continue to depend greatly on it. In this I trust to something, I think, more than whim—for, as I said before, experience has seemed to favour the practice; and besides the analogy of its efficacy in liver complaints, when considered in connexion with an idea which occurred to me some years ago, and which the intimate relation of the stomach and spleen in this case has greatly strengthened, viz. that the latter secretes a liquor which goes to qualify the juices of the former, and soften its acrid properties,—I say, these circumstances in my doctrines, I think warrant my conclusion in favour of mercurials. I will here hint at an idea which has so far, I believe, been overlooked. The gastric juice in the texture of the organ is far more acrid than that which has laid some time in the cavity; and this has always been ascribed to dilution, though the stomach had been empty for hours, or even days. I recollect to have read a case, some years ago,—but who the author was, I have forgotten,—of cholera, in which not a particle of liquid would the stomach retain for eighteen or twenty hours before death; and on the

body being opened, a quantity of mild brown ropy fluid was found in the cavity, yet the operator suffered greatly from the acrid juice of the texture to some small excoriations on one of the joints of his fore-finger, which was inflamed and irritable for some time afterwards. This is merely a vague notion, the practicability of which I do not know—for the manner in which the secretion of the spleen is communicated to the stomach, or the general physiology of this viscus, I have never had leisure to investigate.

More light may be had on this matter before the disorder ceases, in which case I shall endeavour to make another communication on the subject. I shall conclude for the present with suggesting, that the disorder now prevailing in Puerto Cabello is not a fever, but an inflammation of the spleen and digestive organs, which is not able to show itself in its character as an acute disease, from the debility of the patient, and a general febrile disposition of a typhoid character.

Art. IX. *Observations on the Treatment of Cephalitis, or Hydrocephalus Internus.* By Dr. William Hibbard, of New-York.

The treatment of hydrocephalus internus is a subject of much interest to the medical practitioner. It is a disease of frequent occurrence, and when compared with other infantile complaints, proves fatal in a great majority of cases. The laws that govern its approach are but obscurely understood, and its pathology is equally void of satisfactory illustration; its diagnosis also is not only difficult, but often very doubtful—so much so indeed, that the most prominent symptoms of this disease may be, and often are, detected in simple derangement of the bowels, and in the process of teething. Hence this enemy to mankind is often combatted at a disadvantage; and it is not unfrequently the case, that the most alarming symptoms of the disease in question yield to simple evacuating treatment.

In the cure of this formidable disease, however, more energetic means are requisite. The remedies heretofore recommended are various in their kind, and some of them very contradictory in their natures; and the failure of some one of them in producing the desired results, has been followed by the introduction of a different remedy.

Those on which I would place the most reliance, and in the use of which I have had the most success, are simply blood-letting and cathartics. Viewing it as a disease of a high inflammatory character in its commencement, but liable to terminate in effusion, if permitted to progress uncontrolled, I have been led to adopt this simple plan of treatment, and the result has fully answered my expectations.

During the forming stage of the disease, which is evidenced by a listless, sluggish, and inactive state, the bowels obstinately constipated, or occasionally voiding small, slimy, and offensive stools, I administer calomel in large and repeated doses, sufficient to overcome this morbid state of the alimentary canal. Should this, however, not succeed, and symptoms of inflammatory action present themselves, blood-letting, both general and topical, should not for a moment be neglected. General bleeding, where it is practicable, should be preferred: after which, the application of a few leeches to the temples and behind the ears, by keeping up the effect already produced, affords very sensible relief; and applying them at every subsequent exacerbation, will afford the happiest results in moderating the force of the disease and promoting a healthy action. It is not unfrequently the case that children fall asleep while the leeches are on: the fits of screaming are suspended, and the vomiting, which is very troublesome, is sensibly mitigated.

Immediately after their application, the bowels should be freely opened by cathartic medicines, and kept under their influence during the continuance of active inflammation. In the choice of this remedial agent, it is important that such as are calculated to produce free and copious evacuations, without irritating the bowels, should be selected; and nothing in

our list of cathartics affords more satisfactory results than calomel, either alone, or in combination with the pulvis antimonialis or creta preparata, as the symptoms present may indicate. If there be much heat of skin, with a quick pulse, dry tongue, &c., the antimonial powder will form the best combination. Where the vomiting is very troublesome, which sometimes almost forbids the exhibition of remedies by the mouth, the cret. ppt., or a few grains of sup. carb. soda, will in general afford relief. In addition to this, the bowels may be fomented with warm, or rather hot brandy, or brandy and water; observing, however, to prevent the fumes arising from it from being inhaled by the patient, as a species of intoxication may be induced, which will not only alarm the friends, but aggravate the disease. After the vomiting has so far subsided as to permit the calomel to remain on the stomach, it should be given in doses sufficiently large to purge the bowels freely, and repeated or alternated with castor-oil or calcined magnesia, till the quality and appearance of the dejections are changed to a more healthy aspect, the urine becomes more copious, and the heat of skin and rapidity of the pulse are sensibly moderated.

The plan of treatment here laid down is plain and simple, and yet, if properly directed, it will, in a great majority of cases, afford the desired relief. However much the remedies here offered may be condemned, yet experience in their use has demonstrated their value, and should teach us the propriety of using them with a liberal hand. The doctrine promulgated by a few, of the irritating and pernicious qualities of calomel, and the liability that exists of its producing the identical disease under consideration, is destitute of that solidity of position that admits the test of experience in proof of its correctness; and the assertion that calomel never does good in any case, and, when its exhibition is not followed by injurious consequences, it is because it passes the bowels uncombined, is so completely contradicted by the result of every day's experience, that we can only look upon it as the visionary reveries of a brain already too much confused to admit of correct reasoning.

After thus depleting, by every means in our power, the little patient often becomes very much exhausted, and will remain, especially during the remissions, sometimes for hours in a state of syncope. This stage of the disease is very liable to be mistaken for effusion upon the brain; in consequence of which the case is pronounced desperate—is abandoned, and the child permitted to die unmolested—when, in fact, the most violent symptoms of inflammatory action have yielded to the course of treatment previously adopted, and nature is about resuming a healthy action, but from excessive debility is unable (when unaided) to do so. Here the stimulating effects of a blister are admirably well calculated to afford permanent benefit: and I may here observe, that I have never found blisters beneficial in this disease, but on the contrary very injurious, when applied earlier than the stage now alluded to; and the directions to be synchronous with venesection in the application of your epispastics, is not only injudicious, but calculated to produce mischievous consequences.

The following case, taken from a number of others, will serve to illustrate the above principles. A child, four months old, of a good constitution, had been occasionally subject to irregularities of the bowels, sometimes very much relaxed, and at other times very costive, with occasional vomiting, for which it had not taken any remedies; when, on the evening of the 29th July, 1824, it was suddenly seized with violent convulsions, which, from being general for about two hours, gradually assumed a more local form, affecting the muscles of the mouth and eyes. It was bled freely from the arm and temples, put in the warm bath, and the bowels relieved by an injection: towards morning it became composed, and slept quietly for about an hour; it then awoke with violent fits of screaming, accompanied with a rotatory and tremulous motion of the eyes; pulse quick and chorded; a throwing of the head backward, and a constant motion of the arm and leg of the right side. Four grains of calomel, with two of pulvis antimonialis, were given at once, and eight leeches were applied to the left temple: the tremulous motion of the eyes

subsided, and the fits of screaming were moderated, on their application. At 12 o'clock, the pupils of the eyes being very much contracted, and the motion of the leg and head continuing, and the calomel not operating, I gave it three grains more, with two of the antimony: this purged the child once freely, and brought away a very dark, slimy, fœtid stool. After this it became more tranquil. In the evening the fits of screaming occurred again. Three more leeches were applied, which seemed to produce comparative ease for the remainder of the night.

On the morning of the first of July, my friend Dr. Anderson was requested to see the child; who, after learning the history of the case, together with the treatment already pursued, concurred in opinion, both with regard to the diagnosis of the disease, and the propriety of pursuing with activity the plan of treatment already adopted. In consequence of which, this simple plan was continued for eight successive days; the child was leeched with three or four leeches every day, and sometimes oftener, according to the violence of heat about the head and the frequency of the pulse; and they uniformly served to moderate the fits of screaming. It also took, two or three times a day, a liberal portion of calomel and antimony, which was occasionally interposed by castor-oil or calcined magnesia, which operated freely. The pulse became slower—the fits of screaming moderated, and soon entirely subsided—the eyes became natural—the surface was bedewed with a gentle moisture—urine in large quantity—and the passages from the bowels also assumed a more natural aspect; its sleep was more tranquil, the starting and screaming during sleep ceased, and it would awake more composed, notice things offered it, and take nourishment. These pleasant symptoms continued, however, but for a few days: the child gradually fell away into a state of lethargy and inaction, from which it was aroused by a blister being laid on the region of the stomach, which was suffered to remain on till the skin became perfectly reddened, when it was dressed with the ungt. resinosum; the blister filled, discharged freely, and the child

After thus depleting, by every means in our power, the little patient often becomes very much exhausted, and will remain, especially during the remissions, sometimes for hours in a state of syncope. This stage of the disease is very liable to be mistaken for effusion upon the brain; in consequence of which the case is pronounced desperate—is abandoned, and the child permitted to die unmolested—when, in fact, the most violent symptoms of inflammatory action have yielded to the course of treatment previously adopted, and nature is about resuming a healthy action, but from excessive debility is unable (when unaided) to do so. Here the stimulating effects of a blister are admirably well calculated to afford permanent benefit: and I may here observe, that I have never found blisters beneficial in this disease, but on the contrary very injurious, when applied earlier than the stage now alluded to; and the directions to be synchronous with venesection in the application of your epispastics, is not only injudicious, but calculated to produce mischievous consequences.

The following case, taken from a number of others, will serve to illustrate the above principles. A child, four months old, of a good constitution, had been occasionally subject to irregularities of the bowels, sometimes very much relaxed, and at other times very costive, with occasional vomiting, for which it had not taken any remedies; when, on the evening of the 29th July, 1824, it was suddenly seized with violent convulsions, which, from being general for about two hours, gradually assumed a more local form, affecting the muscles of the mouth and eyes. It was bled freely from the arm and temples, put in the warm bath, and the bowels relieved by an injection: towards morning it became composed, and slept quietly for about an hour; it then awoke with violent fits of screaming, accompanied with a rotatory and tremulous motion of the eyes; pulse quick and chorded; a throwing of the head backward, and a constant motion of the arm and leg of the right side. Four grains of calomel, with two of pulvis antimonialis, were given at once, and eight leeches were applied to the left temple: the tremulous motion of the eyes

subsided, and the fits of screaming were moderated, on their application. At 12 o'clock, the pupils of the eyes being very much contracted, and the motion of the leg and head continuing, and the calomel not operating, I gave it three grains more, with two of the antimony: this purged the child once freely, and brought away a very dark, slimy, fœtid stool. After this it became more tranquil. In the evening the fits of screaming occurred again. Three more leeches were applied, which seemed to produce comparative ease for the remainder of the night.

On the morning of the first of July, my friend Dr. Anderson was requested to see the child; who, after learning the history of the case, together with the treatment already pursued, concurred in opinion, both with regard to the diagnosis of the disease, and the propriety of pursuing with activity the plan of treatment already adopted. In consequence of which, this simple plan was continued for eight successive days; the child was leeched with three or four leeches every day, and sometimes oftener, according to the violence of heat about the head and the frequency of the pulse; and they uniformly served to moderate the fits of screaming. It also took, two or three times a day, a liberal portion of calomel and antimony, which was occasionally interposed by castor-oil or calcined magnesia, which operated freely. The pulse became slower—the fits of screaming moderated, and soon entirely subsided—the eyes became natural—the surface was bedewed with a gentle moisture—urine in large quantity—and the passages from the bowels also assumed a more natural aspect; its sleep was more tranquil, the starting and screaming during sleep ceased, and it would awake more composed, notice things offered it, and take nourishment. These pleasant symptoms continued, however, but for a few days: the child gradually fell away into a state of lethargy and inaction, from which it was aroused by a blister being laid on the region of the stomach, which was suffered to remain on till the skin became perfectly reddened, when it was dressed with the ungt. resinosum; the blister filled, discharged freely, and the child

from this time went on gradually recovering its usual health and spirits.

Another case of a child, ten months old, equally illustrative of the benefits of calomel and leeches in the cure of this disease, occurred in April last. There had been a good deal of general uneasiness, which was attributed to teething: the gums were freely divided, and a portion of castor-oil administered. It however passed restless nights; and on the morning of the 20th, I found it evidently worse—it had rejected the oil by vomiting soon after taking it, and the vomiting still continued at intervals; the pulse was rapid; the pupils of the eyes contracted, yet sensible, in a small degree, to the stimulus of light; urine scanty, and high coloured; the hands were almost constantly thrown to the head and before the eyes; the head would occasionally be thrown with violence backward, accompanied with violent fits of screaming; the feet and legs were rather cool, and kept in constant motion; and there was a sensible increase of heat in the head. I now opened the temporal artery, and drew off four ounces of blood; gave it four grains of calomel, with two of the pulvis antimonialis, which was repeated every two hours till it operated; immersed the feet and legs in a warm bath, and directed an enema of Epsom salts and castor-oil. At 12 o'clock, found it had taken three doses of the calomel, though the second one had been rejected partly by vomiting, which continued at intervals; the injection had come away uncombined; and the other symptoms much as before. Instead of the pulvis antimonialis, two grs. of sup. carb. sodæ were added to the calomel, to be given every three hours till it had moved the bowels; at the same time I directed them to foment the bowels with hot brandy, observing to prevent the fumes from being inhaled by the child. 21st. The medicines had operated but feebly, though it had taken four powders, which had been further aided by a small dose of calcined magnesia. The vomiting had moderated after the application of the brandy; the heat of the head and quick pulse (which was at this time 158) continuing, eight large leeches were applied, and the calomel

and antimonialis repeated as at first, together with the pediluvium. After the leeches came off, the discharge of blood was kept up by applying cloths wrung out of warm water; and the child fell into a quiet sleep, which lasted two hours. The bleeding continued for some time after this, during which time the fits of screaming ceased; and the bowels were freely purged, discharging a great quantity of viscid stringy matter, and presenting a shade of almost every colour. Having already apprised the family of the dangerous situation of the child, at the same time requesting a consultation, I met, at 4 P. M., my friend Dr. Miner, who, after being made acquainted with the plan of treatment already adopted, advised its continuance. The next morning, the heat of the head continuing, the pupils still contracted and less sensible, with constant throwing of the head backward and of the hands to the head, the leeches were again applied; and in the intervals of giving it, the calomel, with from two to five drops of tr. digitalis, was ordered. This plan was persevered in for two days (the number of leeches applied every day being lessened); the pulse and the heat of skin, and especially of the head, became gradually less; the bowels assumed a more regular action; and the child noticed things with apparent interest, and took nourishment, which it retained on the stomach. On the 26th, however, there was a great falling off from these favourable appearances: the child all at once became comatose, refused the breast, and occasionally tossed its head from one side to the other, till it finally became stationary; the pupils of the eye became very much dilated, and refused to contract on the near approach of light; and strabismus came on, which, on the most careful observation, remained permanent. The physicians concluded that effusion had taken place, and they and the attendants were led to believe that death would be the result at no very distant period. In this state of things a large cataplasm, composed of mustard, vinegar, and brandy, was applied to the region of the stomach, and similar ones to the ankles and feet; warm wine whey, with comp. spts. lavender, was given by the mouth;

and in the course of four hours, all these alarming symptoms vanished: the child went on gradually recovering its usual health and spirits, till, at the expiration of about four weeks from its first attack, it presented as fine, ruddy, and thriving a countenance as ever. It may not be amiss, however, here to remark, that during its convalescence the bowels were very irregular, and the powers of digestion weak and imperfect. This was readily overcome by the occasional use of the aromatic syrup of rhubarb, which possesses not only the virtues of the rhubarb, but the cordial properties of the spices added to it in the composition of that excellent syrup.

ART. X. *Case of a Tumour in the Antrum Highmorianum, extirpated by* CLARK WRIGHT, M.D. one of the Physicians to the New-York City Dispensary.

WILLIAM LATHAM, a healthy looking boy, aged thirteen years, came to the Dispensary, with a tumour about the size of a hen's egg upon the left side of his upper jaw. It first made its appearance about six months previous, and had gradually increased since, without any pain or inconvenience. At times, a few drops of blood had oozed from the nostril of that side, but there was no obstruction of tears. This tumour proved to be of the osteo-sarcomatous kind, growing within the antrum, the facial and palatine portions of whose parietes were wholly absorbed by its pressure. All the teeth of that side were loose, except the last molar. The first molar tooth was extracted, and a puncture made into the antrum, but nothing escaped. The physicians of the institution, and consulting physicians Stevens and Cheeseman, having decided that an operation was necessary, by extirpating the tumour and its diseased connexions, for the relief of the patient, it was accordingly performed at the Dispensary, on Monday, November 21st, by myself, in whose district the patient resided. The physicians of the institution and consulting physicians were present, and assisted in the operation.

The boy being seated in a dentist's chair, and firmly supported, an incision was commenced at the left commissure of the mouth, and continued to within an inch of the outer canthus of the eye. The integuments were then dissected as far as the orbit and the nasal process of the os maxillare, following its osseous border down to the septum. The lower portion of the integuments was also dissected away, so as fairly to expose the face of the tumour. During this dissection there was some hemorrhage, and it became necessary to secure five or six small arteries. The flaps being held away, a perforator was now introduced into the sound bone, about half an inch below the inner canthus, and passed near the junction of the longitudinal and transverse sutures of the ossa palati. Through this opening a narrow-pointed saw was introduced, and with one finger on the point, was brought out at the socket of the middle incisor tooth, (the tooth having been previously extracted,) including in its course the left anterior palatine plate, and a small part of the nasal portion of the maxillary bone. Through this opening a firm elastic saw, a quarter of an inch wide, was introduced to the place where the perforation was first made. The operator having hold of both ends of the saw, directed it in an outward and downward course, passing between the orbit and infra-obitary hole, along the suture of the os malæ with the malar process of the maxillary bone, and brought it out at the socket of the second molar tooth.

On examining the tumour after extirpation, it was found to be attached by a broad pedicle to the nasal portion of the antrum: it was of a granular structure, and sparingly interspersed with bony matter. The lips of the wound were then adapted together by three interrupted sutures. The operation occupied about thirty minutes, and the lad sustained it with a great degree of fortitude for one of his age.

Tuesday, 22d. The patient slept six hours last night, and is free from pain; takes liquid nourishment, and is enjoined not to move his lips or jaws.

Wednesday, 23*d*. Slept well during the night. The saliva constantly running from his mouth. There is a moderate degree of inflammation of the integuments of the left cheek.

The parts remained in this state for four or five days, at which time the swelling and inflammation began to subside, and the stitches were removed, the wound having united principally by the first intention. Fourteen days after the operation, the boy went into the country with health confirmed. He has since returned: his speech is slightly defective, but the appearance of his face has improved from the operation.

ART. XI. *Case of difficult Parturition, succeeded by a fistulous communication between the Vagina and the Neck of the Bladder, and by a closure of the Os Uteri.* By CHARLES HOOKER, M. D.

[Read at a meeting of the New-Haven County Medical Society, April 18th, 1825.]

ON the 3d of November, 1824, C. M., a coloured woman, aged about thirty-five, very fat, and of a remarkably short stature, was put to bed after an extremely difficult labour. Being called to attend her the night preceding, I learned that the waters had been discharging four days. The pains were now severe and regular, recurring at intervals of about ten minutes, and the os uteri was dilated nearly an inch in diameter. The uterus, however, with the head of the child, was found high up, resting upon the brim of the pelvis; and, by a deformity of the pelvis, the pubis and sacrum were approximated so as to render the intermediate diameter considerably less than two inches.* The woman, who had recently removed from a neighbouring State, informed me that this was her third pregnancy; that about fifteen years since she was delivered prematurely of a very small living child; and that five or six years afterwards, in her second labour, it became neces-

---

* This diameter being accurately measured immediately after delivery, proved to be *scant one inch and eight-tenths of an inch.*

sary to destroy the child before delivery could be effected. From these facts, and from a crookedness observed in the bones of the lower extremities, it seemed probable that the woman was affected with mollities ossium, and that the deformity of the pelvis might have increased since her former labour.

I now waited only for a full dilatation of the os uteri, when I called Dr. Beers in counsel. The head of the child appeared large, and the bones of the cranium were uncommonly rigid. To deliver the child alive, with such a deformity of the pelvis, was therefore evidently impossible, unless by resorting to the Cæsarian operation, which was not deemed expedient. The head was then freely opened with the perforator; but the pains, though frequent and strong, proved insufficient to compress the cranium and evacuate the brain; and it became necessary to remove separately the greater part of the bones of the cranium and face. When the head was delivered, a fillet was passed around the neck, and a blunt hook was fixed into the chest. Considerable extractive force was thus applied to aid the natural pains, which still continued strong. By a perseverance in these means, the woman, after the most excruciating suffering, was at length delivered.

No uncommon symptoms immediately succeeded delivery. Within about two days the patient began to complain of much pain and soreness, and soon after of a severe dysuria. Considerable muco-purulent matter was mixed both with the urine and the lochia. The urine was discharged through the urethra, though with much pain and difficulty, until the eighth day after labour, when it began to flow involuntarily; and, on examination, a fistulous communication was found between the vagina and the neck of the bladder. The urine, within a few days, assumed a healthy appearance, but has never taken its natural course, and generally flows involuntarily; though occasionally it produces little inconvenience for two or three weeks, indicating that the power of the sphincter muscle of the bladder is very different at different times.

The lochia appeared natural, except that the discharge was mixed with considerable muco-purulent matter. About four

weeks subsequent to delivery, symptoms of the catamenia occurred, but were not accompanied with any discharge. From this time the patient complained of a constant sense of weight about the region of the uterus, and occasionally had hard bearing-down pains, and other symptoms of severe dysmenorrhœa—but without any discharge. Emmenagogues aggravated the symptoms; bleeding and opiates afforded partial relief. Nearly three months subsequent to labour, the patient sent for me during an exacerbation of symptoms. On examination, the vagina was clear of obstruction, and the os tincæ could be distinctly felt; but the cervix uteri was nearly obliterated, and the uterus was considerably enlarged. From the various circumstances of the case, I concluded that the menses were obstructed by a *closure of the os uteri.* Dr. Beers was called in counsel, and we each attempted to pass a very small silver cathether into the uterus; but, as a moderate force proved insufficient to overcome the resistance, we concluded to leave the case for the present to the efforts of nature. Another exacerbation of symptoms occurred between three and four weeks from that time. The pains were by turns very severe for about twenty-four hours, when a fluid, similar in colour and consistence to tar, began suddenly to flow from the vagina. About a pint of this fluid was discharged, in almost a continuous stream, within less than an hour. After this, a moderate discharge continued about three days, with every appearance of a regular course of the catamenia. Since that time the menses have been in every respect regular.

The circumstances of this case, I think, warrant the conclusion that the menses were obstructed by a closure of the uterus, occasioned either by a spasmodic contraction, or by an adhesion of the cervix uteri. I am not aware that a similar case is to be found on record. Whether such a closure *by adhesion* would occur while the mucous membrane lining the mouth and neck of the uterus remains entire, is doubtful. Certainly there is often a violent inflammation about the cervix uteri, not followed by such adhesion; but perhaps we are not authorized to conclude that adhesion, under those circumstances, may never occur. In the case above described,

delivery was effected with perhaps as little violence as the nature of the case would permit. Still it is very probable, such was the extreme difficulty of the labour, that the membrane lining the cervix uteri was either abraded, or so contused as to take on ulceration.

Art. XII. *Case of Carditis, with Dissection.* By John J. Graves, M.D. Physician to the New-York City Dispensary.

William Brimmer, a sawyer, aged thirty-two, of a scrofulous diathesis and rather irregular habits, after labouring on Saturday the 3d of the present month, (December,) returned home wetted with rain, complaining of pain in the epigastric region, nausea, and a sense of prostration, for which he applied a blister, and took some purgative.

On Wednesday the 7th, application was made to the Dispensary. I visited him the same day, and found him complaining of deep-seated pain under the base of the left scapula; continual disposition to cough; difficulty in expectorating; nausea and tenderness in the region of the liver: his tongue was covered with a dark coat, and furred to the extremity; pulse a little frequent, regular, and swelling under the finger. Ordered an emetic; pediluvium; sinapisms to the feet; a blister to be laid on the left side; and pulv. Doveri grs. x., c. hyd. sub. mur. grs. v., to be taken at bed-time, to be followed in the morning by pulv. jalapi ℥ss., c. hyd. sub. mur. grs. x.

Thursday, 8th. Found the patient much relieved by the emetic, which had caused to be thrown up a large quantity of tough mucus; the irritability of the lungs in a great measure destroyed; disposition to cough lessened, and expectoration free; tongue moist and slightly furred; pulse regular, and not showing much irritability. The pain, of which he complained yesterday, had left its situation, and had become seated in the anterior mediastinal region. Ordered antimo-

nial solution through the day, with pediluvium and pulv. Doveri grs. x., c. pulv. ipecac. gr. j., at bed-time.

Friday, 9th. My patient had rested well. But little cough, and free expectoration; tongue moist and nearly clean; pulse smaller, soft, and regular; pain less, and situated rather higher; urine high coloured, and bowels scarcely soluble. Ordered infusion of rad. polyg. seneg. ʒj., c. oxym. scillæ ℥ij. Hyd. sub. mur. grs. iij., c. pulv. Doveri grs. vj., at bed-time, to be followed next morning by ol. ricini ℥j.

Saturday, 10th. Alarmed, upon visiting my patient this morning, to find the pulse extremely small, irregular, and intermittent; extremities cold, and pain and tenderness of the abdomen, with constant eructations. Complained of pain, or rather stricture, over the sternum (appearing, from his description, like globus hystericus); his hurried breathing accompanied with rattling: he talked loud and incessantly, but rationally; yet he was so feeble as to be totally unable to move himself. Somewhat surprised at this combination of symptoms, after a few minutes I again felt his wrist, when I found that pulsation had entirely ceased; the temporals beat languidly, and the heart could scarcely be felt. I immediately ordered mustard cataplasms to the abdomen and feet, an injection to be given, and the patient to take camphor grs. ij., c. pulv. opii gr. ſs. every hour.

Sunday, 11th. Brimmer was somewhat easier; pulse stronger and more regular; heart beating with a deep, heavy stroke, and giving to the hand the sensation as if surrounded with cotton or wool.; eructation lessened; pain and tenderness of the abdomen removed, he having had several discharges from the bowels; stricture over the sternum remained, but his breathing unaccompanied by any rattling. Ordered mustard cataplasms to the wrists, and those on the feet to be renewed; wine panada for his drink, and brandy and water every hour.

Brimmer remained quite easy from the time I saw him until about midnight, when he remarked that he would take some sleep—turned without assistance on his side—and died without a struggle or a groan.

The singularity of the symptoms, and the obscurity that marked the disease, induced me to request an examination of the body.

Dissection—eighteen hours after death. Upon opening the sternum, the liver was found enlarged, and encroaching upon the thoracic cavity; the lungs were forced by this organ and the heart to the upper and posterior part of the thorax, where they were firmly held by one continued adhesion extending over their posterior surface; they were highly injected, and exhibited an inflammatory state: the heart was enlarged, inflamed, and laid transversely across the chest, its apex to the left side. A small quantity of yellowish, opaque serum was found occupying the anterior part of the pericardium. The pericardium was thickened, and attached to the heart by a firm layer of coagulable lymph, resembling in appearance the hard-boiled albumen of an egg. This layer was about half an inch in thickness, and is separable in two portions, presenting on the surfaces attached to the heart and pericardium, a smooth and uniform appearance, but when lying together they are shaggy and roughened. Between the outer, or smooth surface and pericardium, there was a deposition of pus. The ventricles of the heart were filled with a fluid blood; the right auricle with a grumous mass of black blood, the left with a firmer and more connected coagulum. Both the arteries and veins of the thorax and abdomen were fully distended; a polypus was drawn from the aorta about twelve inches in length, and near the heart there were observed small spots upon it, which appeared to be organized, for upon holding it up to the light, small vessels were thought to be seen in its substance. The venæ cavæ were filled with a granular coagulated mass. The pericardium was firmly attached externally to the lungs, and inferiorly to the diaphragm. In the cavity of the pleura was found about sixteen ounces of serum; and a small portion of the right lung was attached to the pleura, by a similar coagulum as that found around the heart.

REVIEW.

ART. I. *A Treatise on the Physical and Medical Treatment of Children.* By WILLIAM P. DEWEES, M.D. Member of the American Philosophical Society of Philadelphia, of the Philadelphia Medical Society, Lecturer on Midwifery, &c. Philadelphia. 8vo. pp. 496. Carey & Lea. 1825.

DR. DEWEES is certainly entitled to the credit of being one of the most prolific, as well as one of the ablest writers on subjects relating to the obstetric art, in this or any other country. Within the short space of three years, he has presented the profession with three distinct works, of no ordinary dimensions—all of which have been eminently characterized as the fruits of sound sense, matured experience, and enlarged research. In the present volume, the management of infants and children in health, and the treatment of the diseases to which they are more especially liable, are treated of and discussed in the most ample and satisfactory manner. Convincing proofs are afforded, throughout almost every page, of the futility of the idea, once so pertinaciously entertained, of the impossibility of recognising the complaints of infants, and the consequent necessity of entrusting the care of them to old women and nurses. Absurd as such opinions may now be regarded, they for a long period held sway over the medical profession, and involved the important subject to which they related, in unmerited, and too often fatal neglect. It was not until a late period that a methodical inquiry into the nature, causes, and treatment of infantile diseases was instituted, and considerable time elapsed before the investigation was attended with very marked success. The labours of Harris, Armstrong,

Astruc, and, not to mention other less distinguished writers, Underwood, at length succeeded in removing the difficulties, and clearing away the obscurities which beset the path of the medical student in this interesting branch of professional knowledge. Until the appearance of the work now before us, no attempt had, however, been made to supply the profession in this country with a systematic treatise adapted to the peculiarities of our own climate, and the consequent modifications which the diseases in question undergo. "This supineness of our physicians" (to use the words of Dr. Dewees, in the preface to the second part of his work) "is not less surprising than reprehensible, especially as many are so well qualified for the task by their talents and experience, and moreover as such strong inducement was held out by the peculiar character of our diseases, and, in many instances, by the novelty and boldness of the mode of treatment." Our author, therefore, merits praise in no ordinary degree, for his attempt to supply this deficiency; and the success with which he has accomplished his task, will add no little to his established reputation for talents and industry.

Dr. Dewees has divided the present volume into two books. The first is devoted to the physical treatment proper for children, and is divided into two parts; the first of which treats of marriage—of the conduct of the mother during pregnancy—the influence of the imagination on the fœtus in utero—the indulgence of temper—the food proper during pregnancy—the conduct of the mother during the month—treatment of the nipples—of physical and moral injuries to the child—of dressing and feeding it—and of the nursery. The second part considers the several periods of infancy, and the treatment necessary to be observed towards them, in relation to air, food, and exercise—the time most proper for weaning them—teething, &c. On all these subjects the present volume is replete with judicious and pertinent observations, derived from the enlarged experience of its author, and confirmed by the authority of the most able writers who have preceded him. They are entitled to attentive perusal and study, especially

from those who are likely to be entrusted with the direction and management of life at this interesting and critical period. Nor will they be found unprofitable or unacceptable to enlightened parents and nurses, in overcoming the many idle and frequently dangerous prejudices which have so long been inculcated in nurseries, and sanctioned by the impress of time and ignorance. In recommending the volume of Dr. Dewees to a more general perusal, we hope we shall not be misunderstood as confounding it with a "*Domestic Medicine.*" The author has too elevated and deep a sense of the dignity of his profession and of his own personal character, and of the important duties he owes to his brethren in general, to descend, in the hope of a paltry stipend, to so unworthy and degrading a level.

The second book, as coming more directly within the scope of the objects of this Journal, shall now receive our more especial attention. To the physician in this country it will be found an invaluable guide, long wanted, in the treatment of infantile affections. Excellent as is the treatise of Underwood, it is, in many important particulars, useless as a work of practice for this country. Its numerous and frequently forced subdivisions are not realized amongst us—its rules for the treatment of acute diseases more especially, either inapplicable to our diseases, or wholly inefficient. The importance, safety, and utility of evacuation and depletion, have never been any where so fully and so markedly recognised as in the United States. Yet the young practitioner has hitherto been compelled to gather his information of this all-important truth from scattered, and frequently inaccessible sources, or from the slow result of his own personal experience. This desideratum is now happily supplied; and we proceed to make our readers acquainted, in some degree, with the extent and value of the labour incurred in fulfilling this desirable object.

Of the want of Respiration, and its imperfect establishment. Our author devotes his first chapter for the consideration of this interesting subject. The first rule insisted on is

that laid down first by Mr. White, in his Essay on the Management of Infants at the moment of birth, that "the cord is not to be tied until the pulsations in the umbilical arteries have ceased." Dr. Dewees is at some pains to counteract the contrary directions insisted on by Burns. This appears to us almost superfluous, as the rule of Mr. White has obtained almost universally, and therefore requires no additional arguments in its support.

In all cases in which the cord still pulsates, the danger of extinction of life is not great: where the pulsation has ceased, and the child's body appears languid and weak, and on dividing the cord, the blood which issues is black, there is little hope of resuscitating life. The attempt is, however, always to be made, and that not negligently or hastily, but persevered in for a length of time. In addition to the ordinary rules given, our author insists much on a careful examination of the heart and the cord, that the earliest pulsations excited in these parts may be ascertained, and lead to renewed and more vigorous exertion. In recommending the application of warmth, Dr. Dewees expresses a decided preference for *dry* warmth, as he has seen cases in which the warm bath, so generally relied on, has proved injurious. A query is also thrown out, whether a properly constructed syringe might not be highly useful in removing the mucus which obstructs the passage of the air to the lungs?

A highly interesting class of cases of the apparent extinction of life, occurs in infants that have been too long delayed in the passage, or that have had their necks too tightly begirt with the cord. The face is livid, or even black, and swollen; the umbilical arteries may be inactive, and the case appear desperate. Abstraction of blood from the cord offers now the only chance of relief, and should always be practised, even if the pulsations have ceased. It should be carried to any extent until the establishment of a free respiration. The *modus operandi* of this important agent is easily explained, if we take into consideration the engorged condition of the brain, induced by the causes mentioned above. If the respiration be feeble,

and the child remarkably delicate, a few drops of warm white wine whey, repeated occasionally, will be found extremely useful.

Syncope. In this chapter we find the following interesting case, which we shall quote at large:

"Mrs. F. was delivered, on the 13th of March, 1825, of a small, but apparently a healthy child: she supposed she had not arrived, by two weeks, at her full period. The child cried distinctly, but not very forcibly. It was at the usual time washed and dressed, and took without difficulty a little warm molasses and water. The next day it appeared to be doing very well; its bowels were opened freely, and it sucked when put to the breast. It continued to do as well as children in general, for several days (until the tenth), when it seemed more languid than usual, and did not take its nourishment so freely, nor draw so firmly at the breast; but as it had had several watery green stools during the night, its languor was attributed to this cause. The condition of the bowels was but little regarded, as the nurse supposed the discharges were not so frequent as to require any medicine. In this situation things remained until the following day, when the child, after having repeatedly during the morning refused nourishment, "fainted," as the nurse called it, and we were immediately sent for.

"When we arrived, the child was in a state of fainting, or syncope; so completely, however, did it resemble one dead, that we thought it was actually so, and expressed a fear to that effect. The nurse said, No—it was not dead; it had only fainted, as it had done several times before. We placed our ear over the region of the heart, but could hear no pulsation.

"We caused flannels to be wrung out of quite warm whiskey, and applied all over its little body; small sinapism were placed upon the temples; a drop of brandy was insinuated into its mouth, and its nostrils were wetted with a little sharp vinegar. After these applications were made, which must certainly, we think, have occupied five minutes, the little creature began to discover signs of returning animation, contrary, we confess, to our calculation. The return, as it were, to life, was pretty much in the order stated above: the child, however, was found very much exhausted, and it was some time before it could swallow.

"The bowel complaint was now increased greatly, and the poor child nearly exhausted. It had no return of syncope while we staid, which was about an hour; it could, however, be scarcely said to be alive. We directed the whiskey stoups to be continued; and a weak chalk mixture with a little laudanum, was ordered to be given every hour, or until the condition of the bowels should be improved. A little wine whey, with an equal quantity of cinnamon tea, were directed to be given as often as the child could swallow them.

"We repeated our visit in the evening. The child had had during our

absence one "fainting fit," but it did not last so long as the former: its bowels were still much disturbed, and the child looked more like a corse than a living being. We desired all the previous remedies to be punctually continued. Our next visit was not until early the next morning. The child had had several slight "faintings;" its general appearance we thought more favourable; it swallowed with considerable freedom; its bowels were much improved; it could cry audibly, and looked about with some vivacity. During the whole of this period, its little eyes swam in a yellowish fluid, of considerable tenacity and quantity; indeed, the quantity was so great as to flow down its cheeks; and so tenacious, as to be traced through its whole course by the coat which it left upon the skin.

"We desired a perseverance in the plan mentioned. From this time it began to recover, and mended rapidly, without any return of the faintings. It is now alive, and doing well."—p. 267.

Of the Meconium. In cases of long retention of the meconium, Dr. Dewees has found, after other medicines, as castor-oil and magnesia, have proved ineffectual, a solution of carbonate of soda very useful. In the case of a child, ten days old, very much afflicted by constipation, and to which several teaspoonsful of castor-oil and a scruple of magnesia, in undivided doses, had been given without effect, he administered a grain of the soda in a teaspoonful of warm water every fifteen minutes, until ten grains had been taken, when the child was relieved.

Jaundice. In this disease our author relies principally on castor-oil, and calomel in very small doses, thus:

Calomel, gr. iij.
Sacch. alb. gr. vj.
M. bene, div. in xii.—every two hours in molasses, and on the solution of soda. Where diarrhœa supervenes, laudanum may be necessary, and, in extreme cases, the warm bath has proved eminently useful.

Erysipelas. In the form which attacks infants, our author recommends, as local applications, blisters and mercurial ointment. Of this latter application we are inclined, from our own experience, to think very favourably; at the same time we must state that we have seen the ordinary mild applications succeed, as lead-water, spirits of wine, &c. In the general treatment our author differs from Underwood, in the indiscri-

minate administration of bark recommended by the latter; and we think his objections sound and unanswerable. In the latter stages of the disease, or in cold cases, it may become indispensable.

Aphthæ. Dr. Dewees combats the opinion so long maintained, and latterly by Dr. Good, in his System of Medicine, that aphthæ are transmitted from the œsophagus through the stomach and intestines to the anus. In one case dissected by himself, Dr. D could find no trace of such continuous affection; and he adds as a reason, that it is in violent and long protracted cases alone that the anus discovers any signs of irritation. To us this reasoning does not appear very fortunate. The solitary case dissected will scarcely suffice to overturn a general belief; and the argument adduced in the latter clause of the preceding sentence, proves the very reverse of what it was intended to do, as it only shows that the aphthous inflammation requires some time before it travels throughout the whole course of the intestines till it reach its lower extremity. Is this not an admission of its transmission? Our author denies the contagiousness of these affections, and entertains some doubts of their being caused by a disorder of the stomach. His internal remedies, however, which are the usual ones recommended, evidently act on the principle of a strong sympathy between the parts affected and the stomach. Much reliance is at the same time placed on the local application of equal parts of borax and sugar.

We shall pass over some of the succeeding chapters on colic, ophthalmia, ulceration of the mouth, inflammation of the breasts of children, dentition, crusta lactea, and several other ordinary complaints of infancy.

Diarrhœa. This is well known to be one of the most troublesome complaints of children, and one which, if neglected or treated improperly, is sure to terminate only with death. We are glad, therefore, that Dr. Dewees has paid especial attention to it, and that his directions for its management are so full and satisfactory. He divides the disease into six species: the feculent diarrhœa—the bilious—the mucous—the chylous

—the lienteric—and, lastly, the chronic, or "the weaning brash."

The feculent diarrhœa is caused, either directly, by the presence of irritating substances in the intestines; or indirectly, by the force of sympathetic relations subsisting between the intestines and other parts, as with the skin, the brain, &c. In the former case it is necessary to commence with a cathartic, selected according to the indication of the stools, unless the stomach be foul, when an emetic should be premised. Calomel is preferred by our author for this latter object, with the following judicious remarks:—

"For this purpose, we have ever found calomel, in proper doses, the best possible remedy; for it is almost as certain to cause puking, under such circumstances, as a medicine professedly emetic, without the inconvenience of the latter remedy. The calomel, in such cases, had always better be given in divided doses—say, the full dose, divided into three parts, and a portion of it given every hour in a suitable vehicle,* until it effects the intended purpose.

"The doses of calomel proper for the different ages and habits of children, are easily ascertained when given as just suggested, in divided doses; as this medicine almost always acts with more certainty and promptitude, when thus given, whether its operation is intended to be emetic or cathartic; and at the same time, no possible risk is incurred, as the child cannot take in this manner an over-dose. With the adult, we know that enormous doses are given by some, and this without any additional sensible, though it is said with a greater certainty of ultimate effect: but this does not obtain in the child, where there is so much more irritability of system—and of course it must not be taken for a rule. Therefore, should a full dose be estimated to be six or eight grains, or even less, it must be divided into three or four portions; one of which should be given every hour, until this quantity be taken, unless the previously exhibited parts have operated. And should this fail to have operated as an emetic, we may be pretty certain there is nothing offensive remaining in the stomach, and the calomel will sooner or later pass through the bowels.

---

* "It is a matter of consequence to attend to the vehicle in which calomel is given; its great weight prevents its being suspended by water, or any other equally thin fluid: it must, therefore, be mixed with a drop of syrup, almost of any kind; or, with a very small portion of loaf sugar, may be thrown dry into the mouth. It is also of much use to attend to the quantity, as well as the quality, of the vehicle, as much error is committed by employing vastly too much of it. The quantity should be no more than will entangle the calomel."

"We have made the above remarks, with a hope they may diminish the fears so very often entertained by the violence of this medicine: we can truly say, we have never witnessed a single instance of over-purging or puking from this drug. We do not mean, however, to convey the idea that it cannot happen: far from it; for we are sure it might take place with it, as well as with any other medicine injudiciously exhibited; we only mean, that too much apprehension is frequently cherished when it is exhibited. Therefore, a grain or two more of calomel to a child beyond six or nine months of age, is of no moment, provided this quantity is all the excess. Nor would we say there are not peculiarities of constitution which would prohibit the use of this medicine. These cases, however, are so very rare, as hardly to amount to an exception: but when they occur, they should be strictly attended to."—p. 357–8.

In cases in which the disease has been indirectly brought on, the causes thus producing it should be attended to, and, if possible, removed; after which the disease is to be treated as in the first instance. The following observations on the use of laudanum deserve attention:—

"We are aware that many are opposed to the use of laudanum in the early stages of diarrhœa; but we think they are too indiscriminate in the rejection of this remedy. We are ourselves adverse to its administration, where the bowels have not been liberally purged; where there is fever; and where there is no pain: but where neither the want of due purging, nor fever, make a contra-indication, we almost always give a few drops at night, and especially if the child be very restless, or in pain. We are persuaded we very much abridge this complaint by this plan; and almost certainly prevent its running into a chronic form, after we have removed, as far as in our power, the exciting causes of the disease."—p. 360.

In bilious diarrhœa, we are recommended to evacuate the bowels by calomel, in small but repeated doses, and then at night to tranquillize their action by laudanum; and in the mucous form the same method is to be pursued.

Chylous Diarrhœa. Dr. Dewees believes that in this disease there is a deficiency in the secretion of bile, and that the ingesta are not properly digested, and hence pass too rapidly through the bowels. Debility and evacuation accompany this affection to a remarkable degree. The treatment consists in withholding all food from the stomach, and confining the child to small quantities at a time of rennet whey, or gum Arabic water; in restraining the passages by anodyne injec-

tions "of full power" at night; and administering, during the day, minute doses of calomel, say the quarter of a grain every four hours, with the twentieth of a grain of opium.

The author closes his remarks by the query,—Whether small quantities of bile, exhibited in some form or other, would not be useful in this complaint?

The *Lienteric diarrhœa*, described by our author, does not differ materially from the chylous, either in the history of its symptoms, or in the treatment required for its removal.

The seventh form of diarrhœa is the *Chronic*, identified, in the opinion of Dr. Dewees, with the atrophia ablactatorum of Dr. Cheyne. This is attempted to be proved by the similarity in the history, progress, fatality, and post-mortem appearances in the two diseases. In the management of this affection, four conditions may exist:—First, the hepatic system may be involved in the intestinal affection; second, inflammation or ulcerations, contractions, and intersusceptions, may have supervened; third, worms may be present, and add, by their irritation, to the violence of the disease; and, fourth, the influence of habit may render the disease inveterate. Peculiar modifications of treatment are required for each one of these aspects of the disease, and are detailed with great accuracy and minuteness. We must refer to the book for information on these several points, analysis being almost out of the question.

Cholera Infantum. This is one of the few diseases which are peculiar to this country, and which is, more than any other, destructive of the lives of infants and children. Even where it proves not fatal, it is always a highly distressful affection, proving the source of long-continued and severe suffering to the little patients, and of exquisite trials on the fortitude and sensibilities of mothers. Emaciation—constant and acute pains—watchfulness—insatiable thirst—a countenance denoting the most afflictive agony—these are only a few of the symptoms which render this disease the most severe in aspect and in reality, of any that compose the mass of our infirmities at this early period of life. Happy are the parents,

and thrice blest the physicians, who, by unceasing vigilance and discriminating skill, suffer no opportunity to pass by without an attempt at mitigating the violence and reducing the strength of this terrible enemy to life. Too much attention cannot be paid by the medical student to the investigation of this subject: a perfect knowledge of its various forms, and of the method of cure adapted to each, will alone furnish him with means to encounter a disease which is unfortunately too common and too fatal. Still it is not without the reach of medical skill. Unbiassed and matured experience never fails to arrest its progress, if an attempt be made to subdue it in season, and by those efficient agents which arrogant and blind prejudice only condemns. On so important a theme, we shall ask no apology for permitting our author to speak at large. His description of the disease is full and interesting.

"Cholera infantum makes its approaches in different ways. In some instances it comes on as a simple diarrhœa, though the stomach is also very apt to be affected; and in its more violent forms, there are vomitings and purgings, attended by no inconsiderable spasmodic uneasiness, constituting the cholera morbus of farther advanced life. In its ordinary forms, the fever, which soon supervenes, is of an irregular remittent character—the exacerbations being highest in the evening. The pulse is usually small, quick, and feeble, or irritated, and corded; but rarely full, strong, or voluminous. Determinations to the brain, or at least this organ seems early to be affected sympathetically; as is manifested by a tendency to stupor or delirium, or sometimes even frenzy. The eyes also denote this cerebral affection; they are either fierce or languid in expression; and when the patient sleeps, are half closed. Thirst is intense, and for a time really unquenchable; cold water is clamorously demanded—but if swallowed, is instantly rejected. An unequal distribution of temperature commonly exists; the head, and region of the stomach and bowels, being hot, while the extremities are cold.

"The evacuations from the bowels are various. The natural fæces are mostly retained, though occasionally small lumps may be found involved in the other discharges. These are sometimes thin and watery, and at other times more thick and tenacious; consisting chiefly of slime, or mucus, occasionally tinged with blood. The colour may be green, or yellow, or white, or brown; and may be inodorous, or exceedingly offensive. Commonly, however, the smell is that of sourness, or of putridity. The irritability of the alimentary canal is sometimes so great, that the ingesta rapidly pass off unaltered, as in lientery.

"We have few diseases in which emaciation so rapidly takes place, or where, in its latter stages, there is a greater alteration of general condition and aspect. The child, at first, becomes pallid, and the flesh flabby; and, so completely is the fat ultimately absorbed, that the integuments hang in folds; and in those parts on which the body rests, livid spots appear, followed by ulcerations.

"The skin on the forehead is tight, as if bound to the bone; the eyes are sunk; the cheeks fall in; the nose is sharp; and the lips are shrivelled. Even under such circumstances, which would seem to denote immediate dissolution, life will be in some cases preserved for weeks, and a recovery finally take place. The belly becomes tumid, from flatulence; the feet still more frequently are œdematous; aphthæ appear; the mind, as well as the senses, which hitherto may not have been impaired, are now obtuse, or so entirely lost, that the child lies unmoved by ordinary excitements, and will even allow flies to collect on the face, without being irritated or disturbed. This form of the disease will sometimes continue for five or six weeks. But as death approaches, a gradual aggravation of symptoms takes place; and there is one, which, as far as we have observed, has always proved fatal: it is a crystalline eruption upon the chest, of an immensity of watery vesicles, of a very minute size. The best idea we can convey of the appearance of this eruption, is to imagine a vast collection of vesicles, apparently produced by flirting an equal number of very minute drops or particles of boiling water, and each particle producing its vesicle. We first pointed out this appearance to our friend Dr. Physick, in the year 1794, in the disease now under consideration; and subsequently, under like circumstances, to Dr. Rush; both of whom acknowledged the eruption new to them.

"This symptom may readily escape observation, if not looked for: it requires that the surface on which it has spread itself, should be placed between the eye and the light, and viewed nearly horizontally.

"There is another symptom, which attends the last stage of this complaint, which is much more common, but not less fatal; which is, the thrusting of the fingers, nay, almost the hand, into the back part of the mouth, as if desirous of removing something from the throat. The popular opinion is, that there is a worm irritating the back part of the fauces. And we may mention another, which we do not remember to have seen noticed; which is, the escape of a live worm or worms, in the chronic stage of this affection. If the worm comes away dead, there is nothing in the circumstance; but if alive, it is a deadly sign. We have remarked the same in dysentery.

"In other cases, however, especially where it puts on the character of cholera morbus, or dysentery, its progress is more rapid, and runs in all respects the course of these affections. Death, in the former of these instances, will sometimes take place in a few hours; and in the latter, from three to ten or fifteen days."—p. 396.

Dissections always prove the nature of the disease in the most clear manner. The brain presents no morbid changes, excepting in the latter stages. The viscera of the thorax are seldom affected. It is the abdominal viscera which suffer.

"The effects of previous inflammation may be traced, in some cases, throughout the whole of the alimentary canal, though it is in the mucous membrane that they are principally to be found. Dark livid spots are dispersed over this coat of the stomach, and of the small intestines, particularly the duodenum, near to the pylorus. Coagulable lymph is also, in some instances, spread on their surface, or is found in detached pieces. In many parts there is an alteration of structure, by the thickening of their coats; so much so, that the calibre of the tube is reduced considerably.

"The large intestines are seldom involved in this mischief; and perhaps never, excepting where the disease assumes the dysenteric form. Now and then, appearances similar to those of the primæ viæ, may be seen upon the peritoneum, though not to any extent. The liver, under almost all circumstances, and especially in cases of long continuance, is greatly enlarged, so as sometimes to occupy two-fifths of the cavity of the abdomen. But, though thus increased, there is not any very evident derangement of structure. It is merely distended, or swollen, by congestion; and, on this account, is more firm and solid, than natural—a state of things, evidently induced by torpor in the portal circulation. The gall-bladder, in some instances, is found filled with dark green bile, and, at other times, with that which is pale, or nearly colourless. The other viscera of the abdomen are usually healthy. It may, however, be proper to add, that the contents of the bowels, for the most part, consist of a thick, tenacious mucus, involving small lumps of fœcal matter, occasionally coloured by bile. When this disease causes death, by assuming a chronic form, it very much resembles the chronic form of diarrhœa, or weaning brash."—p. 400.

In the treatment of this affection, one of the first symptoms to be encountered is the great irritability of the stomach. To subdue this, our author has found nothing so useful as an injection of a gill of warm water, in which have been dissolved three teaspoonsful of common salt. This is the dose for a child of a year old; it must be proportionably less for one younger. A teaspoonful of strong coffee, without sugar or milk, every fifteen minutes, should be given to very young children especially. Dr. Dewees has seen it, in all ages, act like a charm.

If the stomach be not tranquillized by these means, minute doses of calomel must be had recourse to. The following is our author's prescription:—

℞. Calom. Ppt. gr. iij.
Sacch. alb. gr. vj. M. div. in part. xij.

One of these powders is to be given every hour, until the bowels are operated on; after which the powders must be given at longer intervals. In the evening, especially if there is pain, an injection with laudanum should be given. In this way the first stage of the disease is treated, excepting where there is much fever, when general and local blood-letting is necessary. When the irritation of the stomach is very obstinate, blisters should be applied to the legs.

The second stage is to be treated by anodyne injections, a mild purgative being occasionally interposed to prevent oppressive accumulations in the bowels.

The warm bath and blisters are necessary to divert to the skin. If, however, irritation in the bowels still continues, with bloody evacuations, the oleaginous mixture, composed of castor-oil, gum arabic, and laudanum, or, what is better, melted butter, or a union of sugar of lead, ipecacuanha, and opium, should be administered.

When chronic diarrhœa has supervened, the cretaceous and alkaline preparations are called for. We copy one or two prescriptions.

℞. Cret. Prep. vel Test. Ostreor. ʒiſs.
Gum Arab. } - - āā ʒj.
Sacch. Alb. }
Tinc. Theb. - - - ggt. x.
Aq. Font. - - - ʒiij. M.

Another prescription is given, in which thirty grains are substituted with the above ingredients for the chalk.

As a tonic, the following formula of Dr. Chapman is recommended:—

℞. Sal. Martis. (super-sulphate of Iron) gr. ij.
Acid Sulphur. - gtt. x.
Sacch. Alb. - ʒj.
Aq. Font. - - ℥j. M. Dose ʒj.

Directions then follow on regimen and diet, with which we shall not detain our readers.

Pertussis. It has frequently been a source of surprise to us that this disease, intractable as it frequently proves to the powers of medicine, hidden as are its origin and causes, should have hitherto elicited so little discussion in the medical world. It carries off a full proportion of victims annually; and yet it is too often confided, as of no consequence, to the care of mothers and ignorant nurses, as if its treatment was well ascertained, and its cure a matter of course. The disappointments which too often attend such fallacious confidence, should at length awaken attention to the subject, and lead to a more ample investigation of the nature, causes, and treatment of the disease.

It has been a question with some, whether whooping cough is contagious, or in all cases derived from epidemic influence. Our author is evidently inclined to the latter opinion, but does not think it prudent, for practical purposes, to disclaim altogether a belief in its contagious attributes.

The following is Dr. Dewees's view of the nature of this affection :—

"It is obvious that the irritation of the remote cause, wherever it may be primarily seated, induces an inflammation of the mucous membranes of different parts of the organs of respiration, occasioning an increased secretion of fluid, which accumulating, acts as an extraneous substance, and brings on the cough for its expulsion. When this natural effort succeeds, there is for a time a complete interruption of the coughing; but on its being re-produced, we have a repetition of the paroxysm. By too long a continuance of this irritation, disorganization takes place in the lungs, &c.; and the system at large, participating in the morbid affection, a gradual exhaustion of strength, and death takes place: or, the air-cells being choked up, or the glottis closed by spasm, or by collections of mucus, or lymph, the patient dies suddenly from suffocation: or possibly, in some instances, as is represented, the brain may become so affected as to constitute a new and more complicated case, terminating life by coma, convulsions, &c. At this period, an inflammatory state of the system undoubtedly exists: it however exhibits a very peculiar character, owing, perhaps, to the nature of the cause by which it is excited; for it unquestionably is far less obedient to the usual remedies than ordinary inflammation; and in many respects proves illustrative of the modification which this condition receives from the agent producing it."—p. 411.

In the treatment, our author does not advance any thing novel. He is, however, interesting in his details of all that has been recommended and found most useful.

Cynanche Trachealis. In relation to this disease, our author observes, that nothing can be more satisfactorily proved than the agency of cold moist air in its production—especially in the spring. In Philadelphia, he observes, that "a north-east wind in early spring, or fall, is almost sure to produce, or reproduce, this complaint in those who are disposed to it." Dr. Dewees divides croup into three stages: the forming stage—the completely formed stage—and the congestive stage; and his description of each is so just, that we shall quote him at length.

"*First Stage.*—One of the first and most certain signs of this complaint being about to take place, is a peculiar sonorous hoarseness, when the patient coughs, but which at this period does not affect the speaking voice. This peculiarity exists for a longer or shorter time, without much increase, even for several days, in some instances; while in others, the interval, or stage of formation, is very short, but decidedly marked. This hoarseness may, in some instances, be accompanied or preceded by catarrhal symptoms, but not necessarily. In this stage, when not attended by catarrh, we find, for the most part, the circulatory system undisturbed, and the respiratory not confined, nor even hurried. The child, in general, is as cheerful as usual, and its appetite and digestive powers are undisturbed. In a number of instances, where the disease was making an insidious attack, we have seen children exert themselves even pretty violently, without creating any uncommon hurry in the breathing, or occasioning the slightest embarrassment in it; yet these very children, in the course of a few more hours, were reduced to the last extremity; and some of them did not escape with life.

"We think we have observed, however, in this forming stage, especially in the insidious attacks, the hands to be more than usually cool; the face to be rather unnaturally pale; and the skin to resemble, in a small degree, the cold stage of an intermittent, but not attended by a sense of cold: this state of collapse remains for several hours, in some instances, before the system is roused to re-action. But where the attack is sudden, we are by no means certain that this condition always precedes the febrile state, which so frequently is awakened, and made to accompany this complaint.

"During this period, however, the mucous membrane of the nose is observed to be affected; since the secretion in the nostrils is either arrested altogether, or very much diminished; and continues to be so during the

whole course of the disease, unless it terminates favourably. The cough is short, dry, and sonorous; or if any thing be expectorated, it is thin and whitish, and in very small quantities. If the throat, or fauces, be inspected, nothing unusual (at least as far as we have observed) shows itself. The back part of the tongue is perhaps rather more loaded than is natural, but it is far from being remarkable.

"After the continuance of the above symptoms for a longer or shorter time, a change takes place, by an aggravation of all of them; and at the same time others are added; and these will constitute the

"*Second Stage, or that in which the Disease is completely formed.*—We now observe the hoarseness to be increased, and to affect the speaking voice; that is, the tone of hoarseness is evidently deeper, more ringing, and betrays itself in every attempt to speak; the cough is more frequent, and the spells longer; a degree of exhaustion, attended by an increase of the difficulty of breathing, follows each effort; the face becomes flushed during the coughing, but generally subsides as the circulation becomes more equal, after the exertion, but leaves the cheeks, or perhaps only one, redder than natural. The circulation is now much hurried in most cases; at other times it is very little disturbed: when this latter is the case, the face is seldom flushed, and the hands and skin of the extremities are rather below the natural standard of heat. The child is drowsy, and falls into frequent, but disturbed slumbers, from which it is generally roused by the most heart-rending cough, and an increase of oppression. The child raises itself up, if sufficiently old to do so; or if not, elevates its head, with desire more freely to gain air. This state of things does not last long; for if the progress of the disease be not arrested here, it marches with rapid haste to the

"*Third, or Congestive Stage.*—At this period, the cough is attended with some expectoration of a thin, or frothy mucus, which affords no relief: it is more frequent in its recurrence, and more permanent in its duration; sometimes so much so, as to threaten strangulation; the child becomes much exhausted by these efforts, and throws itself back as if in despair, but from which it instantly springs, from the feeling or dread of instant suffocation. It cannot now lie down; and it either throws its head much in advance, as in asthma, or bends itself very much backward; or it finds no relief but in a supine position, and that apparently the most unfavourable to easy breathing. It is restless in the extreme; and alternately tries every position, without finding relief from any.

"The face is no longer flushed; a dark lividity takes its place, which sometimes spreads itself even to the neck; the lips partake of this change; and the gums become pale and white, while the tongue is not unfrequently blackish, as if the blood was retained in it by a ligature. The forehead becomes shining, and the skin looks as if it were tightly stretched over it; it is wet with cold perspiration, as is now indeed almost every part of the body. The pulse is small, frequent, fluttering, and contracted. The heart beats with violence, nay sometimes audibly. The auxiliary muscles of respiration

are now called into requisition, and this process seems only maintained by their aid; a deep hollow is made immediately below the xiphoid cartilage, most probably by the severe contraction or efforts of the diaphragm; and the action of the heart is distinctly seen, even at a distance from its seat.

"Though the cough is now more frequent, and the oppression much increased, the hoarseness is neither so great nor so sonorous. It is now almost a loss of voice, and the child, when it speaks, seems to employ for this purpose a loud whisper. Even when it coughs, the voice is less harsh; or rather, it has lost in a degree that appalling, brazen, vibratory sound, with which the two first stages are attended. This change of tone has but too often misled the inexperienced ear to a belief that the disease was yielding; and thus has given rise to hopes that were but too soon to be for ever blasted.

"Thirst oftentimes becomes so intolerable, as to render the demands for drink both frequent and clamorous, though every attempt to gratify it is apparently at the risk of suffocation. The countenance is now anxious beyond expression; the eyes become more piercingly brilliant and beseeching—they eloquently implore a relief, which neither affection nor science can afford; and the poor sufferer expires, with a look full of supplication and anguish."—p. 429–433.

We perceive that Dr. Dewees does not believe in the existence of that distinct species of croup which has been denominated the spasmodic; and he is equally sceptical in relation to the doctrine maintained by some, which makes the croup to consist in inflammation and spasm united. In the two first stages of the disease, he expresses his utter disbelief in the presence of spasm; in the last, he admits that it may, and possibly does, take place.

Our author treats as altogether visionary, the opinion of those who have undertaken to dispute the formation of a membrane within the trachea in this disease. We concur most fully with him when he says, that such a doctrine can only have been advanced by "those who are not in the habit of investigating diseases by dissection."

Treatment. Under this head, we are furnished with many valuable suggestions in relation to the management of this formidable disease. In the *first stage*, Dr. Dewees recommends in all cases, the instant the croupy sound is observed, to inflame the external throat by the application of the spirits of turpentine, hartshorn, or mustard and vinegar. If the first

application of these articles does not subdue the hoarseness, it is to be repeated as soon as the rubefacient effect has subsided. At the same time the compound syrup of squills is given, in doses suitable to the age of the child, and urged, if circumstances require, till an emetic effect is produced.

In the *second stage*, the system may be found in one of two conditions—viz.: 1. Where the disease is completely formed as regards the state of the trachea, but without the arterial system being much affected. 2. Where the action of the arterial system is much exalted, in consequence of the inflammation of the trachea. Each of these conditions require a different mode of treatment.

"In the first case, the force of the disease is mainly spent upon the organs immediately concerned in respiration; hence the cough is more frequent, nay, sometimes almost incessant; the hoarseness less deep, but more sonorous and vibrating; no expectoration, or in a very trifling degree, and that of unconcocted serum, the discharge of which affords no relief. The face for the most part rather pale, or partially flushed; the nostrils very dry; the hands and skin generally rather below the natural standard; the eyes somewhat bloodshotten; the pulse frequent and small, and the respiration laborious, and every hour becoming more and more so."—p. 437.

Under these circumstances, Dr. Dewees considers the remedy so generally relied on, namely, blood-letting, to be, if not positively injurious, never beneficial. He therefore never employs it, but commences his treatment by the stimulating applications already mentioned, to the throat, and an active emetic of tartrite of antimony; or, should it be advisable, to evacuate the bowels at the same time. The antimony is combined with calomel in the following manner:—

℞. Tart. antim. gr. ij.
Calomel - gr. xij.

This to be divided into eight parts, and one to be given every twenty minutes or half hour, until an emetic and cathartic effect be produced. After the free operation of this medicine, the compound syrup of squills is to be given every hour or half hour, according to circumstances. If the disease does not yield to this treatment, calomel, in large and repeated doses, is the remedy then relied on.

In the second stage of the disease, that is, where the blood-vessels are more affected, free venesection is the primary and principal means of relief resorted to. The point to which the bleeding is to be carried, is that of making the pulse flutter under the finger, or a disposition to syncope shows itself. The repetition of the bleeding is to depend upon the re-action of the system and force of the pulse. Between the intervals, emetics, rubefacients, calomel, as before directed, are to be assiduously used. Of the various modes of local bleeding, Dr. D. prefers the use of cups, and between the shoulders the best place for their application. With regard to leeching, Dr. D. makes the following remarks :—

"The operation of leeching is attended with several circumstances decidedly adverse to this disease: for, 1. It employs considerable time; during which the patient is obliged to maintain an irksome position, and this may be extremely unfavourable to his breathing. 2. It often becomes important that the quantity of blood to be drawn should be very exactly determined: this cannot be done in leeching—especially as the after-bleeding is sometimes very considerable, in spite of every attempt to arrest it, to the manifest injury of the patient. 3. Their coldness; and the sudden exposure of the throat, after having been warmly covered, is oftentimes so mischievous, that the bad symptoms can be seen to increase during the operation, and are almost sure to follow immediately after. We can most safely declare we never have, in a single instance, seen it do good; but we have, in a number of cases, seen it do harm."—p. 441.

Of blisters our author does not seem to entertain a very high opinion, preferring to them rubefacients "whose powers are more at command, and can be renewed whenever they have ceased to maintain a proper degree of irritation."

Of the warm bath, Dr. D. expresses the following opinion:

"We can most conscientiously declare we have never, in a single instance, witnessed a decided advantage to arise from its application; but we can most truly say, we have had the most unequivocal evidence of injury; we therefore never prescribe it in this disease."—p. 443.

Third Stage. The indications here are, 1st, to remove the obstructing lymph from the windpipe; and, 2d, to prevent the formation of more, by altering the condition of the inflamed surface of the trachea. Emetics have sometimes

fulfilled both these indications. Dr. Dewees, however, expresses but little confidence in any other remedy than the polygala seneca. In relation to tracheotomy, our author makes the following judicious remarks:—

"In our opinion, the operation has been proposed with more intrepidity than discretion; for until we can prevent new accumulations after the removal of the previous ones, we need promise ourselves but little success from this scheme. It has been said, that the failure from this operation has been principally owing to its being performed too late; and hence it has been advised early in the disease. But who would promise himself that he had saved life by this operation, should the patient even live, since if it be performed early, other remedies might have succeeded as well? And when performed late, who has witnessed its success? Therefore, in the early stage of the disease the operation is certainly not called for, nor would it be proper to have recourse to it, since the disease is very often relieved without it; and in the latter, we believe it has ever been unavailing.

"We have seen it performed twice without success, where the operation, simply considered, had every advantage which sound judgment and consummate skill could give it—for Dr. Physick was the operator. And we believe we do not venture too much when we say he has no confidence in it."—p. 446.

Burns. Accidents of this sort so frequently occur, and are so often attended with dangerous consequences, that their treatment becomes a matter of great interest. The following is Dr. Dewees's method of managing them:—

"When a part is merely inflamed, we have found the steady application of cold whiskey, brandy, alcohol, and even water, not only relieve the immediate pain, but sometimes to quickly remove the inflammation, especially if it be not extensive. If the inflamed portion of skin be considerable, the same plan may be pursued; but the relief will not be so sudden, though it may eventually be as certain. Wrapping the part in cotton is highly recommended, but we cannot speak of it from experience.

"If vesications attend, we almost always apply the spirit of turpentine, a little warmed, to the part, and protect it from the air as quickly as possible, if the wound be considerable, and also, that the turpentine should not be applied to the sound skin. Should much pain attend, we give a suitable dose of laudanum. We almost always allow the first dressings to remain for twelve hours; and when we re-open the sore, we take care it shall not be exposed to a current of air, or a cold atmosphere. Our second dressing consists of the basilicon ointment, according to the recommendation of Dr. Physick.

"We are in the constant habit of opening the vesications by the point of a needle, before we apply the ointment. This kind of dressing is continued so long as the peculiar inflammation of a burn continues—or, as the common people express it, until the fire is out. Should the discharge now become too abundant, (a very common occurrence, especially if the surface be large,) we use the cerate of Turner, or the simple cerate, in which a quantity of prepared chalk is incorporated.

"Should the burn be deep, and of course the part killed, the basilicon is the best application until the parts begin to show signs of separation. But should the parts immediately round the injured part be much inflamed, we are in the constant habit of using the bread and milk poultice, until it subside. When the inflammation is reduced to a healthy degree, we return to the basilicon or to the cerate, until the part slough out. After this has taken place, we either use Turner's cerate, or the basilicon, or simple cerate, as the wound may seem to require. We use the first where the discharge is too abundant; the second, where it is deficient; and the third where the suppurating process is going on kindly."—p. 480.

In closing our notice of Dr. Dewees, we have only a single remark to make. In the preface to the second part of his book, he professes one of its objects to be that of embodying into a systematic form, the recorded experience of our American physicians in relation to the diseases of children. In performing this task, which we think he has very satisfactorily done, we should have been much more gratified had we found an occasional acknowledgment made to some at least of the physicians upon whom it is quite evident that he has drawn pretty largely. We had a right to expect this from an author of Dr. D.'s established reputation, whose just fame can sustain no possible diminution by freely giving credit where it is merited. We regret this omissiou on the part of our author, not merely because it is an act of injustice to his professional brethren, but because we fear it may by some be attributed to motives very different from those by which we are sure he was actuated.

ART. II. *Typhus Syncopalis, Sinking Typhus, or the Spotted Fever of New-England, as it appeared in the Epidemic of* 1823, *in Middletown, Connecticut.* By THOMAS MINER, M. D. pp. 48. Middletown, Connecticut. 1825.

OUR object in noticing this pamphlet is not criticism. Indeed from the plain matter of fact manner in which it is drawn up, it would not be very easy to indulge in it, even if we felt so disposed. Our simple design is to record upon our pages the history of a very formidable, and in some respects a very singular disease. With this view we shall content ourselves with laying before our readers as condensed an abstract as we can of Dr. Miner's account of its general character and mode of treatment. Dr. M. informs us that with the exception of a few sporadic cases which occurred since the year 1815 or 16, the disease which he describes was entirely new at Middletown, and had never prevailed there as an epidemic until 1822. In that season, he states, that the fevers in that region assumed a new character, differing entirely from regular typhus, whether of the nervous or putrid type, and requiring a corresponding change in the treatment. In 1823 the disease is described as having prevailed in a greater or less degree, in about a dozen towns in the vicinity of Middletown, and in all of them to have had a common character. Between the months of March and December of that year, about three hundred and sixty cases fell under the care of Dr. Miner and Dr. Edward S. Cone; of these, twelve only proved fatal. Persons of all ages and of both sexes were alike subject to the disease. It made its attack under two different forms, which Dr. M. calls the sudden and the insidious. In the former the duration of the disease was from five to seven days. The account given of the symptoms is somewhat elaborate; but we find it impossible to condense it, and shall therefore give it at full length.

"In nearly every instance, whether severe or moderate, the disease began with more or less pain in the head, especially about the forehead. Vertigo was also a symptom almost universal. In some, a sudden faint-

ness, dizziness, or sense of extreme exhaustion, so that the patient could neither sit nor stand upright, was the first symptom. In others, the attack resembled a severe concussion of the brain, or a sudden stroke of palsy or apoplexy. Indeed, every thing seemed to show that the brain and nervous system were the primary seat of the disease.

"In almost every case, the skin was preternaturally cool, for several of the first days, and subsequently, in temperature, *it never exceeded the standard of health*, in more than three or four cases. Even after it had been warmed by internal and external heat, in conjunction with stimulants, it was ever liable to become *partially* cold, as about the thighs, knees, legs, arms, hands and feet. In the course of the disease, more especially in the worst cases, it was almost always so much benumbed, as to be insensible to an ordinary pinch or scratch, and while in this state, incapable of being affected by common sinapisms and blisters. This numbness was sometimes most prominent in one side, or even in one leg or arm. In the latter stage however, there sometimes occurred periods of extreme susceptibility to the impression of rubefacients and epispastics; but as a general rule, external applications, of ordinary strength, would produce very little effect, till something like reaction had been effected. Complete agues or rigors, this year, were very rare in any stage of the disease. Commonly, through the whole course of the disease, the surface, though not dry or husky, was seldom much inclined to spontaneous moisture. In a few instances however, there was a morbid, drenching perspiration. Sometimes, though rarely, the patient would complain of a general sensation of heat, though, to the feel of the attendants, he would be actually cold. Is not the heat, which has been often said to occur in some epidemics of this disease, either a transient flush, or the *calor mordax*, the stinging sensation merely, and not the actual augmentation of thermometrical temperature? If increased heat, and increased frequency of the pulse, are a part of the definition of fever, a great majority of the cases had no fever at all, but were merely an acute neurosis. At this day, however, it is well known that these symptoms are often absent in irregular pyrexia.

"The countenance, in most of the severe cases, had a kind of leaden hue, with marks of anguish. In some, there were patches of a bright flush, intermingled with other patches that were preternaturally pale. In a few cases, the pupils of the eyes were contracted, and in a few, dilated. In some cases, the organs of sight and hearing were irritable in the extreme; in others, they were equally torpid.

"There were two prominent varieties of the tongue, the contracted and pointed, and the dilated and flabby. The fur of the tongue assumed every possible deviation from health, and was of every conceivable variety, except that it never had the appearance which is usually found in synocha. In the course of the disease, red tongue was rather more frequent than any other. Two uncommon varieties of fur sometimes occurred, one of which was a greenish slime, and the other a mucus, varying in appearance, from

moist brown sugar, to light coloured molasses. The former was rare; the latter, more common. Most of these varieties of tongue were liable to sudden changes in the same patient. In some of the protracted cases, there were aphthæ. A black tongue seldom appeared, and two or three instances of it only were noticed. On the whole, the state of the tongue was of very little service in diagnosis, or prognosis. In general, there was little or no thirst; but sometimes it was urgent. In such cases, it was generally aggravated by cold water, and palliated or removed by a persevering use of aromatics or alcohol.

"The stomach, on the one hand, was usually as torpid and inactive as a leathern bag, so that in many instances, the patient would choose scalding hot liquids; or on the other, it was irritable in the extreme. The change from one to the other of these extremes, was generally sudden, and occasioned by slight causes, or took place without any assignable cause. In the majority of the severe cases of sudden attack, unless the violence of the disease was immediately subdued by very energetic practice, torpor prevailed for the first two days; but for the succeeding three or five, the irritability would be so extreme, that without the nicest and most careful management, vomiting or retching would be incessant. The matter ejected generally consisted of little more than the drink, or secreted mucus. In a few instances, it was greenish; in a very few, dark coloured. Though in some instances this vomiting was very troublesome, yet there was never any bile evacuated, except in two or three patients that had long laboured under a chronic hepatic disease, or except as the consequence of an ill-timed emetic or cathartic. Indeed, the vomiting or nausea, in this disease, seemed ordinarily to be entirely symptomatic of an affection of the brain, or was obviously the effect of an emetic or cathartic, the sympathies being the reverse of sick head-ache. This was evinced by its being excited by raising or moving the head, or by placing the patient in an erect posture, and relieved, by a recumbent position; and especially, by blisters to the forehead, temples, and more particularly, to the vertex. Blisters to the region of the stomach alone, though of some service, produced much less effect in relieving this symptom.

"With the exception of the few cases that commenced with Diarrhœa, Cholera, or Dysentery, the bowels were naturally torpid. Ischury, from mere torpor of the bladder, was much more common, than in other low typhoid diseases. There was a profuse discharge of urine in a few cases. In general, in common with ordinary low Typhus of the *nervous type*, there was nothing peculiar in the appearance of this excretion. Indeed, the excretions were never more offensive, and usually much less so, through the whole course of the disease, than in health; and the alimentary canal was not disturbed by any thing which it contained *naturally*. The eructations and ejections of air had no peculiar, disagreeable odour, there was no fetor of the breath, and in all stages, as well at the bed-side of the dying, as at the access of the disease, *there was no febrile smell.*

"The condition of the brain, in this disease, was usually very similar to that state which is produced by exposure to carbonic-acid gas, or which is occasioned by excessive doses of some preparations of lead, or of certain essential oils, or of active and pure narcotics. In many cases it resembled concussion, or apoplexy, or palsy. In all the severe, and in a majority of the mild cases, there was from the very access, before a particle of medicine had been taken, *a peculiar deficiency of vital energy in the brain, and the whole nervous system*, so that raising the patient into an erect posture, would generally produce the same sort of vertigo, anxiety at the stomach, acceleration and irregularity of the pulse, nausea, and even fainting, which result from a similar position after a great loss of blood. In almost every instance, the patient was much more comfortable when the head was *low*; and much inconvenience, and even danger, was almost invariably occasioned from any other than a horizontal posture.

"The mind was more or less affected in every severe case. In the majority of such cases, after the patient was induced to apply for medical advice, there was a morbid fear, entirely independent of any existing urgency or danger of symptoms, and of any information respecting sickness and death in the vicinity. The public were not panic-struck, as the deaths were so few as to cause very little alarm. Fear, therefore, was rarely a predisposing or exciting cause in this town, though it evidently was in some of the adjoining. In some cases, there was a morbid clearness of intellect, attended with incessant loquacity, or there was too great watchfulness, and extreme restlessness; both of which states were always, sooner or later, followed by delirium or coma. Nearly every case of delirium alternated with coma, but every case of coma was not attended with delirium. In some cases, the delirium resembled intoxication; in many, Hysteria; and in others, it was of the low muttering kind, such as is common in ordinary low fevers. In some few cases, there was no other delirium than what was manifested by a false estimate of the disease, the patient, when in the greatest danger, instead of showing any signs of fear or apprehension, insisting that he was but slightly sick. In most cases which received early and judicious medication, delirium did not occur to any extent.

"Except where there are convulsions, or, in a very few instances, where something like maniacal exertion appears, or when the fever counterfeits Delirium-tremens, the affection of the brain in this disease, (unlike many head-affections in Pneumonia-typhodes, and common Typhus,) rarely produces any increased muscular strength; but on the contrary, it usually occasions great languor, and inability for muscular exertion, which is more especially manifested when the patient is in an erect posture. As has been before observed, this debility was a kind of paralysis, and appeared to arise from a partial extinction of the vital principle, more resembling the effect of excessive doses of the active and pure narcotics, or of a sudden and violent concussion of the brain, than the exhaustion of the

latter stages of common fever. The exhaustion or deficiency of *vital energy* in both cases, appears to be the same, and the same proportion of the living principle is extinguished; only, at the end of protracted fevers, there is a great waste of the solids and fluids of the body, which must be repaired before much muscular strength is acquired.

"In many of the severe cases, the patient on going to sleep, would fall into a state resembling incubus, with difficult or partially suspended respiration, which would require his being awaked as often as once every five minutes; and some could not be allowed to sleep longer at one time for several days, without their spontaneously waking in the most excruciating fright and distress, and finding themselves greatly exhausted.

"During the progress of the epidemic, every variety of pulse occurred, except the *strong* and *hard*, and this often in the same patient. In many of the mild cases, and in most of the others, till the period of fatal sinking, it was rarely so frequent as in health; but towards the close of life, in several of the fatal cases, it was a hundred and twenty or thirty, and occasionally, a hundred and sixty in a minute. In less than twelve hours, it would sometimes vary in frequency from forty, to a hundred and thirty. In one instance, it was as slow as twenty-seven beats in a minute, and in six or eight hours varied to a hundred and thirty. This patient recovered so rapidly, that he was able to ride out in a week from his first attack. After the disease was fairly formed, whether it was moderate or severe, an erect or sitting posture would almost uniformly accelerate the pulse forty or fifty beats in a minute, and sometimes double its frequency, besides producing considerable irregularity. In a very few cases, the pulse was a hundred and twenty at the very first attack. The pulse alone, (as is the case with the tongue,) is a very deceptive guide in this fever. At various times in the course of this disease, and even in the dying, it would occasionally give a delusive feel of fulness and force, that often deceived the very best judges respecting the danger, unless attention was particularly directed to other symptoms. In such circumstances, in former epidemics, bleeding has been seriously proposed by a counsellor, while the attending physician knew the patient to be actually *in articulo mortis*. In other epidemics, in which this disease was mistaken for active inflammation of the brain, or for apoplexy, when the patient has been bled, death has ensued before the ligature could be taken from the arm. In most of the worst cases, the circulation was daily so languid by turns, that the extremities had a livid appearance, and were often nearly pulseless. One patient at least recovered, that was without pulse at the wrist for several hours. Some of the fatal cases were attended with a very distressing palpitation of the heart.

"A very prominent symptom, which occurred in some degree in almost every instance, even of the mild cases, and probably without an exception in all the severe, and happened in every stage, sometimes constituting the first access of the disease, consisted of paroxysms of *subsidentia*, or death-

like *sinking* sensation in the epigastrium, that was described, sometimes as extreme distress, sometimes as a painful sense of vacuity and faintness, sometimes as trembling or fluttering, sometimes as real pain and anguish, and at others, was declared to be utterly indescribable. During the existence of these paroxysms, the coolness and numbness of the skin, the lividness of the extremities, the feebleness of the pulse, and the indications of distress in the countenance, were much augmented. Sometimes, these paroxysms of sinking, were attended with palpitation, and often with spasms; though spasms, tremors, and subsultus were not uncommon in every stage. In the mild cases, these paroxysms of sinking, occurred *regularly* in the morning; but in the severest, they were not confined to any particular hour of the day. Singultus was extremely rare, as also was indurated, inflated, or tympanitic abdomen.

"In many of those cases which were neglected, or treated with evacuants, or in which the early symptoms were not decisively and fully met and subdued by appropriate remedies, a peculiar and somewhat different, and usually irreparable sinking and exhaustion occurred, *after a critical effort*, or in lieu of a crisis, on the third, fifth, or more commonly, on the seventh day. In a few cases, it did not occur till the end of the second or third week. Under such circumstances, in addition to the sinking in common with other cases, the respiration was interrupted and peculiar, and much resembled that of the dying, or rather that of animals (as it is described) after a division of the *par vagum*, the inspirations occurring only at intervals of several seconds, and being usually long and full, while the expirations were so short, that the breath was parted with instantaneously. This *critical* sinking, in combination with morbid respiration, was often the first warning of danger to the patients and attendants, in the insidious cases, and it was almost invariably irremediable; for, although every symptom could be met, for a time, to the full extent, and although the most decided operative effects of medicine could be produced, and life often be prolonged for days, yet the weight of the disease could rarely be lessened, and, in one of the succeeding critical efforts, the same symptoms would almost inevitably prove fatal. In other fatal cases, the disease terminated in a deadly coma. Paroxysms of coma were periodical in some instances, as were those of sinking in others. The former description of sinking and anxiety, which was principally referred to the epigastrium, in distinction from the *critical*, may be termed *ordinary* sinking. It was usually relieved when taken in season, and treated with energy.

"Hæmorrhages were rare in this disease; but when they did occur, they were mostly fatal. One case of a child which died on the seventh day, was attended with symptoms of chorea. One or two cases were seen that resembled delirium tremens. Many had most of the usual symptoms of hydrocephalus internus. Several retained their habitual relish for strong tea, snuff, and tobacco, through the whole course of the disease. Milk-porridge, or broth, was the food that generally sat easiest on the stomach.

In a few cases, there was a strong disposition to eat heartily of solid animal food. In those in which this appetite was moderately indulged, it seemed to digest properly; at any rate it produced no sort of inconvenience.

"In opposition to ordinary fevers, in this disease the symptoms were generally much more urgent and severe in the morning, than in the afternoon or evening; that is, the patient was most dangerous during the remission. The reaction of the exacerbation in the afternoon, though it did not reach the standard of health, and could not even be considered as reaction at all in common fevers, made the patient comparatively easy. When there was a resolution of the disease at its outset, a relapse would infallibly supervene suddenly, upon any considerable irregularity of diet, exercise, &c. within the first week; but when the disease had once run its course, there were very few relapses during convalescence. There were several repeated attacks, after the most perfect recovery; and several of the patients had had the disease the preceding year. Critical periods were most prominently observed. When a case was protracted longer than five or seven days, as in the last stage of almost every acute fever, the disease appeared, though still more liable to severe and fatal sinking at the critical periods, not very unlike common low typhus, in which delirium, tremors, subsultus, coma and sinking occur; and was not easily distinguished from it, especially by counsellors, who could not witness its whole course."—pp. 7—14.

Treatment. Dr. Miner speaks in the most unqualified terms of the injurious consequences resulting from the use of emetics, cathartics, and all the evacuating and debilitating medicines. "Copious evacuations," he says, "invariably rendered the mild cases severe, and the severe ones fatal. Probably more than three-fourths of the fatal cases were the consequence of spontaneous or factitious purging or vomiting." So injurious does our author represent these medicines to have been, that he asserts even the mildest laxatives were frequently not unattended with danger; "one patient was even seen, who sunk irretrievably by a single operation of an enema." Most of the cases were however slightly purged with calomel, so administered as not to operate before twelve or eighteen hours—and this, accompanied with a diaphoretic regimen, in mild cases would lessen, and frequently remove all morbid action. In the severe cases, *opium* was the remedy almost exclusively relied on.

"Opium was the most important remedy in the severe form of this disease, and was, in such cases, *regularly* administered from the very first visit. A few cases imperiously required half an ounce of the tincture in an hour, or half a dram in substance, in the course of twelve hours, before the urgent symptoms could be controlled; and even some cases required a dram in the same time. All these patients recovered. In nearly every fatal case of this year, there were circumstances to prevent a free use of medicine. *The whole of those patients, whose symptoms were promptly met with opium, invariably recovered.* Opium enough, assisted by external applications, would command every peculiar symptom, with as much certainty, as any effect can be promised from medicine, except the extreme sinking, after a critical effort, in a neglected, or ill-managed case; and even in this forlorn state, it always mitigated much of the anxiety and distress, and prolonged life. Many other articles, however, were very useful in the course of the disease."—p. 16.

Of the other remedies used, Dr. Miner gives us the following account.

"Alcohol was highly beneficial in some cases, and required to be employed freely in many, but it seemed not to be equally adapted to all, and on the whole, was of much less importance than opium. Wine seemed totally unfit for the severer cases. Lytta and capsicum internally, were very serviceable in the torpid cases, but were entirely unmanageable, and greatly increased the irritability of most of those which were previously irritable. Arsenic, (Fowler's Mineral Solution,) was highly serviceable when the head was very much affected, and the stomach at the same time torpid. In some irritable cases it answered well, but it was necessary to adjust the dose very accurately, in order to have its full effect on the one hand, and not offend the stomach on the other. In these cases, however, it agreed better than any thing else, except opium, or perhaps alcohol and aromatics. Delirium, resembling mania, was occasionally relieved by tincture of stramonium, combined with tincture of opium. Camphor and ammonia answered a good purpose in the more moderate cases, but were worse than nothing in most of the severe. Ether was of no service for permanent support, but was occasionally very useful during the sinking paroxysms. The same was the fact with peppermint, and other essential oils. Oil of turpentine was not used internally. Cinchona, and the other *vegetable bitters and tonics*, did not the least good in the severe cases. They were too slow in their action to produce a perceptible effect, till after a crisis, or in the protracted stage of such cases as assumed the form of common typhus. After convalescence commenced, they were often useful to assist in retaining the ground which had been gained, and to accelerate recovery. In these instances, if the stomach was irritable, sulphate of quinine was preferable to any other preparation of cinchona.

"In all the varieties of this disease, internal medicines were greatly assisted by external applications, which were adjuvants that could never, with safety, be omitted. When it was practicable, the early use of the *hot-bath* was of great service, and it was much to be regretted, that it could not be oftener employed in the first stage. Warm or tepid bathing was rather injurious. The water should be so hot, as to make as strong an impression as can be borne without danger of scalding. When strong, and at the same time quick rubefacients were required, bottles of hot water, heated bricks or wood, hot spirits, mustard, liquor of ammonia, capsicum, and oil of turpentine, were important agents. Epispastics of cantharides would produce no effect, in many cases, till the skin had been first excited in this way; but as soon as the susceptibility of the patient was raised, by internal and external means, to the blistering point, the freest application and repetition of them, was attended with the most obvious beneficial effects. They were more especially useful to the *shaved vertex*, forehead, temples, spine, epigastrium, and extremities. In every case, (the very mildest are not with safety excepted) the forehead, and in the severe, the vertex should be immediately blistered. Shaving the head, and blistering it early, is more serviceable than any other external application. Torpor of the bladder almost invariably yielded to sinapisms, or more especially to blisters on the inside of the thighs. So sensible were those patients who had their reason, of the beneficial effects of blisters, that they frequently begged to have them repeated. To one patient, more than twenty blisters, and to another, more than thirty were applied during the course of this disease, and evidently with the greatest advantage. *Oil of turpentine, warmed, and confined to prevent evaporation, was the speediest epispastic*, and was of much benefit in coma. In a very few cases, there supervened such a peculiar irritation in the latter stage, that blisters required to be repeated with caution, on account of strangury, as this symptom, in irritable cases, sometimes increased the morbid action. It always lessened it in cases of torpor. In no other disease is it so essential to distinguish counteracting from coinciding agents. But after all, in the severest forms of the disease, *opium*, *alcohol*, *arsenic*, *aromatics*, *and external applications*, with no other medication, might be depended upon.

"In the mildest cases, after cautious purging with calomel, the prescriptions were almost negative; such as to avoid vegetable acids, cold water, muscular exertion, an erect position for any considerable length of time, much purging, and various other hurtful measures. Numbers of cases might be stated, in which the patients, while labouring under an apparently moderate disease, from a false idea that they should gain strength by sitting up, have produced the most dangerous paroxysms of vertigo and sinking, some of which have been followed by death. Many of the severest cases did not admit of being moved from their beds for several days; since the slightest motion, or change of position, was liable to produce a severe paroxysm of sinking, and increase the exhaustion to such a degree, as to

require hours to regain the ordinary strength. Some slight cases might be trusted to aromatic, bitter infusions, alone; others to camphor and ammonia. In several of these, no calomel, or opium, or alcohol, or any active medicine, was needed or employed, provided all hurtful measures were studiously avoided. In many, a blister to the forehead, serpentaria, camphor and ammonia, compound tincture of cinchona, and opium in very small quantities, were all that were required.

"Profuse sweating from external heat was useless in the mild, and inefficient, or injurious in the worst form of the disease, unless employed at the very access; and in this stage, it could rarely be used with convenience. By the time a physician is called, it is generally too late for sweating to be of much service; though, when employed very early in cases of *sudden attack*, it is sometimes capable of breaking up the disease, especially in the torpid variety. Under such circumstances it ought generally to be tried. The duration, severity, and mortality of this disease, depend more than any other, upon the early management.

"On the whole, it must be repeated, the epidemic afforded the most decisive evidence, in favour of the efficacy of a free use of opium, when employed in season, for the removal of coma, and other atonic affections of the brain. When the early treatment was efficient, there was sometimes a resolution in twenty-four hours, or the disease rarely lasted longer than five or seven days; but when the practice was so timid and inert, as only partially to meet the symptoms, if the patient did not immediately sink, it was generally protracted somewhat in the form of common typhus, fourteen, or twenty-one days, and in some few cases, four or five weeks." p. 18.

Having given an account of the symptoms and treatment, Dr. M. next inquires as to the real character of the epidemic. Ordinary typhus fever it obviously was not. For a variety of reasons, which are given at some length, he contends for its identity with the spotted fever which prevailed in Hartford in 1809.

"The peculiar and extreme deficiency of vital energy in the brain and nervous system, from the very access of the disease, *without any appreciable reaction during the whole course*—the early urgency of the symptoms—the constant liability to coldness of the extremities, and numbness of the skin—its degree of insusceptibility to the action of strong rubefacients and blisters—the peculiar distressing and death-like sinking in the epigastrium—the craving of hot liquids—the alternation of extreme torpor and excessive irritability of the stomach—the great liability to sudden and irremediable sinking—the respiration resembling that of animals in which the *par vagum* has been divided—the immediate exhaustion produced by an erect position—the delirium resembling intoxication, (when neither alco-

hol, opium, nor any other medicine had been used,)—the extreme variableness and irregularity of the pulse, particularly its occasional deceptive fulness and force, when the patient is in the most alarming state of exhaustion—the very rapid progress of the disease—the impunity, at least, with which the most extraordinary doses of opium were borne, (which must be acknowledged by all, from the unparalleled success of the practice, whatever may be realized of its necessity and advantage by those who did not watch the whole progress of the cases,)—the injurious effects of free evacuations, whether spontaneous or factitious—the general inefficacy of all medication to gain a hair's breadth upon the disease, when, from neglect or bad management, the patient had once sunk down at a critical period, though perhaps the same degree of exhaustion might not have been very alarming at the crisis of any other ordinary fever, and though individual symptoms might be capable of material palliation—the absence of febrile smell, and indeed, of any uncommon fetor of the excretions—all mark the identity of the disease with the Hartford spotted-fever of 1809, and evince its diversity from common typhus or nervous-fever. From these considerations, it is believed, no one will hesitate to admit that this disease, at least as respects the severest and most sudden cases, was genuine spotted-fever, and that it was essentially different from common typhus. Indeed, the two diseases differ so much, especially during several of the first days, that the best treatment of common nervous fever, would prove fatal in every severe case of spotted-fever. With the utmost confidence it is asserted, that by the experienced, they might be always discriminated, and therefore should never at this late day, be mistaken or confounded together. It is true, that in a great majority of the cases of this year, the disease was less violent, and more manageable than the spotted fever of 1809, and indeed, than it was this same season in several adjoining towns. The only difference appears to be, that the mild and insidious cases, were in a much greater proportion this year than formerly. The cases of sudden attack were identically the same as those of 1809, and *all the others* were clearly varieties of the same epidemics. But this is a point of difference which existed to an equal degree between several of the different cases of both epidemics. Why may there not be prominent varieties of spotted-fever, as well as of common typhus, yellow-fever, cynanche-maligna, pneumonia-typhodes, dysentery, &c.?

"This disease, however, was peculiarly distinguished from every other, by the early paroxysms of sinking that attended it, by the entire absence of the stage of reaction, which is so essential to ordinary fevers, and by the great effect which opium had in mitigating all the dangerous symptoms of *every stage*, but more especially, irritability, delirium and coma. In every instance, except after the fatal sinking of a critical period, provided a sufficient quantity could be swallowed, or recieved and retained by enema, (which latter, in some few cases, was the best way of administering it,) it seemed to be invariably capable of obviating the symptoms in question.

"In common typhus, whether of the nervous or putrid type, even after a critical sinking, we can, in general, not only call the remaining excitability into action, but as is evident, actually produce a new secretion of vital power. But this can rarely be done, after the critical sinking of the worst cases of spotted-fever. If, therefore, we have not produced an early change, or begun thoroughly with a much more energetic course, than similar symptoms in ordinary typhus would demand, or even justify, our prospect of success is small. In the sudden attacks of the severest cases, which rouse all our energy, and usually make us even more successful in this disease than in ordinary fevers."—pp. 19–21.

We have now presented our readers with such copious extracts from Dr. Miner's pamphlet, as we think will enable them to form a judgment for themselves, in relation to the disease which it describes.

ART. III. *A Lecture delivered at the opening of the Medical Department of the Columbian College, in the District of Columbia, March* 30, 1825. By THOMAS SEWALL, M. D. Professor of Anatomy and Physiology. Washington. pp. 80.

THIS is a very able and interesting discourse, containing much information that is both curious and valuable, interspersed with many judicious and pertinent reflections, and written in a style at once unassuming, chaste, and vigorous. Its character and objects, it may hence be inferred, differ essentially from those of the mass of lectures which, under the title of *introductories*, are annually delivered in some of our older medical schools, and which, on suitable occasions, are issued from the press, in order to instruct the profession in the superior claims of the writers, and of the institutions with which they are connected, to the exclusive admiration and support of the public. That they fail in their intended effect, and frequently produce a decidedly opposite one, will not be matter of surprise to those who have subjected these productions to the test of an impartial, but strict criticism. The vapid and inflated style—the ostentatious and haughty display of vain pretensions and unjust claims—the gross inaccuracies

in language, and the frequent unblushing plagiarisms with which they abound,—are sufficient to excite general disgust, and overwhelm their authors with merited contempt and marked unpopularity. Is it difficult then, to assign a cause for the diminished number of pupils who attend to the *ex cathedra* instruction of such teachers, or for the utter want of reputation and character under which their schools are doomed to languish, and pine away into insignificance? Let a different course be pursued: let talents and worth be fostered; let a liberal policy be exhibited in word and deed; let the interests of the profession at large be made the paramount object of ambition and policy, and a regeneration will not be slow in completion. Until such a change has been effected—until the system has been cleared of the mass of prejudices and selfish interests with which it is infested,—it is in vain to expect improvement and prosperity. Boisterous declamation, insidious menace, pompous exultation in fancied superiority, and cringing flattery, avail not. Radical reform is necessary—and without it, hopeless is the fate, and dreary the prospect, of misguided ambition and monopolizing selfishness.

To return to Dr. Sewall's excellent discourse. The subject selected for discussion is the early history of medicine, and of medical schools in the United States; and a more happy and interesting theme could not have presented itself to a lecturer in this country, nor one which, at a future period, will be more likely to awaken the curiosity and arrest the attention of the learned inquirer. Dr. Sewall thus enters, after a very few preliminary observations, on his subject:—

"On looking back upon the early history of our country, our attention is arrested by the extraordinary fact, that more than a century and a half elapsed after its first settlement, before a single institution existed, either for the education of physicians, or the regulation of the practice of medicine.

"Early and ample provision was made for the purposes of general education. Schools and Colleges were established; many able politicians, accomplished civilians, and learned divines, were produced; while scarcely a scientific physician was to be found, excepting such as had sought an education in the schools of Europe, or had emigrated to this country from abroad.

"This fact is the more remarkable, since our ancestors must, from repeated ravages of fatal diseases among them, have learned the importance of education, in directing a profession so intimately connected with the preservation of human life. Yet, when we consider the objects for which they emigrated, and the extraordinary circumstances that attended them, we shall find a satisfactory explanation, if not a full apology, for their disregard of medical science.

"No other colony was ever planted in a foreign country, composed of individuals of the same character, actuated by the same motives, and governed by the same policy, as that which first settled America. Our ancestors did not come hither for the purposes of monied speculations, or scientific research. Neither the love of money, nor the acquisition of knowledge, could have induced them to separate from relatives and friends, the comforts of domestic life and civilized society, to encounter the perils, the labours, and privations, that awaited them on the hostile shores of a savage wilderness. A zeal more pure, and a spirit more elevated, inspired and sustained them. It was the great master principle of religious liberty and religious reformation, that enkindled the zeal of our fathers, directed their course, and bore them on to this western world. A principle, the effects of which have descended to us, and are still visible in every part of our country.

"It is not strange that, under such circumstances, the interest of the church should have predominated, and have given a leading character to all their institutions; while medicine and other branches of science were regarded as subordinate objects, and left to be developed by the future necessities and resources of the country.

"Other causes, no doubt, had an influence in retarding the progress of medical science, during the early part of our history. A new country is not favourable to the improvement of science, and particularly to a science which more than any other is founded on observation and experience. The general health that prevails, the scattered state of population, and above all, the poverty which renders it necessary for every one to provide for his wants with his own hands, while they damp the ardour of inquiry, preclude the possibility of accurate and extensive observation. The depressed state of medical science which marked the period of the emigration, may be regarded as another cause that retarded its progress for many years in this country.

"Our ancestors lived long enough in Europe to imbibe something of the genius of their native country, and the spirit of the age. This was then a country whose medicine had scarcely emerged from empiricism, and an age still abounding in superstition. It was not to be expected that they should bring with them a high respect for a science, or an ardent devotion to its interest, which had been but little cultivated, and which at that period was extremely limited and hypothetical. The discovery of the circulation of the blood by Harvey, and the course of the chyle by Aselius and

Pequet, had been scarcely promulgated, when our ancestors embarked for America; and the labours of the Monros and the Hunters, as well as the improvements of the anatomists, physiologists, and surgeons of France, which have reflected so much light upon the science, were effected long after this period. Nor was it till since our ancestors left Europe, that the great medical schools of Edinburgh, London, and Paris, acquired that celebrity, and exerted that influence on the science, which has been so extensively experienced through the world during the last century.

"When we consider, then, the object for which our ancestors emigrated to America; the difficulties they had to encounter; the state of the country to which they came; and, above all, the depressed state of medical science throughout Europe at the time, it is easy to explain their disregard of medical education, and its slow progress for many years that followed." —pp. 4–7.

As far as the few records now in our possession, aided by tradition, go, it appears that the first persons who practised the healing art in our country were clergymen. "For many years," says Dr. James Thacher, in a letter to the author, "after the first settlement of the country, it was deemed indispensable for clergymen to acquire a knowledge of practical medicine, to discharge the duties of piety and humanity to their suffering brethren; and though they were not endowed with high attainments in medical science, they were, nevertheless, qualified for great usefulness in their respective stations. Altogether unlike the ignorant empirics of later times, they were actuated by the purest motives, and the highest considerations of benevolence. By their amiable manners, zealous attention, and pious converse, they endeared themselves to their people; mutual attachments were formed, and the fullest confidence reposed in their skill." We recommend the attentive perusal of this extract to our professional brethren, not only on account of the merited tribute it conveys to the worth of a useful and virtuous class of our predecessors, but because it conveys a valuable lesson in medical ethics.

Not to practice alone did the clergy confine themselves; they entered the lists of medical authorship, and had the honour of writing the first treatises on the diseases of our country. "A Brief Guide in the Small-pox and Measles," was the first publication issued from the medical press of America.

This was in 1677; and it was the production of a learned divine of Boston. The second medical work which appeared here, was also written by one of the same profession, and was an essay, entitled "A Good Management under the Distemper of the Measles." Excepting this class of practitioners, there were few well educated men employed in the profession; and it was not until the formation of the literary colleges at Cambridge, Yale, and in Virginia, that things assumed a more favourable aspect. Graduates from these seminaries occasionally turned their attention to medicine—went to Europe to receive their professional education—and formed a respectable corps of well-informed and enlightened physicians. With these were mingled foreign practitioners, who at times were induced to emigrate to this country, and make it their permanent domicile. The following was the state of the profession at this period:—

"In those days it was not uncommon for a skilful surgeon to ride one, and even two hundred miles, to amputate a limb, or reduce a dislocated shoulder, while patients for more difficult operations were compelled to cross the Atlantic; and at this period females were the only accoucheurs of the country. No medical schools for the education of physicians had been established; and such a thing as a respectable medical library did not exist. The works of Sydenham, Boerhaave, Van Swieten, Mead, Brooks, Huxham, Cowper, Keill, Douglass, Heister, Ledran, and Lewis, were almost the only authors that were known or studied in America; and these were seldom found in the same collection."—p. 11.

For a century and a half no improvement was discernible in the condition of medicine. Insulated instances of physicians no less eminent for their literary attainments than for their practical skill and extensive experience, were not wanting to illuminate the general gloom which hung over the prospects of our science. Of these, Dr. Sewall has collected, from various sources, highly interesting notices in the notes appended to his discourse. The names of many must be generally familiar to the medical student in this country; as, John Mitchell of Virginia, who wrote an essay on the yellow fever of 1737–41–42; Dr. Zabdiel Boylston of Massachusetts; Cadwallader Colden of this State; William Douglass

of Boston; John Lining of Charleston, S. C.; Tennant, Redman, Bond, Gardner, Ogden, Maclurg, &c. &c. A large portion of these physicians were natives of Great Britain; but as they passed their lives in these provinces, and as their works relate chiefly to the diseases of this climate, they are justly claimed as ornaments to our own early medical literature.

We now arrive at a more important period, when the first germs of our present extensive system of medical instruction by public lectures began to make their appearance. The first attempt made to establish a medical school in America was in 1765. Courses of lectures had been previously delivered at Newport in Rhode-Island, but they were temporary, and soon given up.

In 1765, Drs. Shippen and Morgan laid the foundation of the Philadelphia school. It is somewhat remarkable that both these enterprising physicians were not only natives of this country, having been born in Philadelphia, but received their literary and classical education at home. Their medical education was completed in Europe, under the most favourable auspices, and there they jointly concerted the plan of founding a medical school in their native city. Dr. Shippen commenced his course of lectures on Anatomy and Midwifery in 1762, and continued them annually until he was joined by Morgan in 1765; when the Trustees of the College of Philadelphia, concurring in the laudable design of these enlightened medical friends, established the medical school under their own immediate authority.

The second medical school established in the United States, was that of this city, founded under the charter of King's College, in 1767. The Professors were, Drs. Clossey, Jones, Middleton, Smith, Tennent, and Samuel Bard.

The next school was that of Harvard College, established at Cambridge, Massachusetts, in 1782. We subjoin the following interesting detail respecting its origin:—

"This school probably owes its origin, in some degree, to the revolutionary war; an event which, though it suspended for a time the progress of the two schools already existing, seems to have contributed more to the

advancement of medical science, and its general diffusion through the country, than almost any other that has occurred in our history.

"The formation of an army collected together the physicians from every part of the country, promoted social intercourse, and opened a new field for medical investigation. Military hospitals were established for the reception of the sick and wounded; new forms of disease were developed; many important operations in surgery were performed; and frequent opportunities presented for the cultivation of practical anatomy, to those who had never before witnessed a dissection. At the close of the war the physicians and surgeons returned home, carrying with them the spirit they had imbibed for medical investigation, together with the results of an extensive experience: and thus was disseminated through the country, a fund of practical knowledge, and a taste for medical inquiry, which was never before known, and which no other circumstances could have produced.

"It was soon after the army was encamped at Cambridge, and a military hospital opened in that town, that the medical school of Harvard was first organized, and the plan laid for a course of public lectures. This event seems also to have been hastened by the anatomical lectures of Dr. Warren, which had been delivered in Boston the two preceding years, and which the students of the University had liberty to attend. In the commencement of this school three professorships were established, and the late Dr. Warren, Dr. Waterhouse, and Dr. Dexter, appointed to fill the chairs. Under this organization, a course of lectures of about six weeks' continuance was given, annually, for twenty-eight years."—p. 19, 20.

The *fourth* school is that of Dartmouth College, at Hanover, in the State of New-Hampshire, instituted in 1797. This was founded by the enterprise of Dr. Nathan Smith, one of the most eminent surgeons of which our country at this day boasts. "In 1798 he was appointed sole Professor of the school, and for twelve years gave lectures on the different branches of midwifery, excepting two courses, in which he was assisted in the department of chemistry."

The fifth medical school is that of Baltimore, regularly organized in 1807, and owes its origin to Dr. John B. Davidge.

Dr. Sewall next proceeds to notice summarily the more recent institutions—at Fairfield in this State; at Yale College; at Cincinnati; at Castleton, Vt.; at Lexington, Ky.; at Brunswick, Maine; at Providence, R. I.; Pittsfield, Mass.; Charleston, S. C.; Jefferson College, Philadelphia—making

in all sixteen; to which if we add the one established at Washington, in which Dr. S. himself is Professor, and the one recently established at Troy in this State, we shall have *eighteen* Colleges for instruction in medicine in this country—a pretty large number, and showing, in a most decided manner, the ardor with which medical science is cultivated, and the numerical force of the profession.

From the notes and other data we gather that Philadelphia still retains her supremacy over every other institution in the United States. The old College has 450 students, and Jefferson College 110, making 560 for that one city. New-York has 164!—Baltimore, 300—Fairfield, 135—Lexington, Ky. over 200, &c. &c.—which will tend to show the relative estimation and standing of the schools. It requires no comment from us in this place, although, as citizens of New-York, justly proud of her pre-eminence in wealth and resources, we must lament the ill-fated inferiority in rank of our city institution.

Dr. Sewall next considers the history of medical societies in this country, which will be found interesting in detail. He then observes:—

"Besides our medical schools and medical societies,—dispensaries, hospitals, infirmaries, and asylums for the reception of the poor, the sick, and insane, have been established in almost every part of the country. Several hundreds of these institutions, supported by public endowments, or private charity, are found in the United States; and, while they afford means of protection and relief to a large portion of the helpless and suffering part of the community, they furnish ample opportunities to the medical student to investigate the causes and nature of diseases, and become acquainted with the operation of remedies; thus uniting the objects of humanity and the advancement of medical science.

"This is not all that has been done in America for the interest of medicine. We have already produced some of the best works of the present day, on anatomy, surgery, the theory and practice of physic, materia medica, pharmacy, chemistry, obstetrics, and medical jurisprudence; works which have not only been adopted as the text-books of our own schools, but have been republished abroad, and received the highest commendation of European professors. Our periodical journals, of which we have no less than twelve published quarterly, or at shorter intervals, besides hospital reports, and the transactions of medical societies, abound with original papers, and many of them of great value.

"It must be gratifying to every American to know, that the medical literature of the United States is, at this time, sought for and read with avidity in every part of the civilized world; while much of it is translated into the French, the German, and Italian languages, and republished in the journals of those countries: the highest compliment that could be paid to the genius and industry of our physicians."—p. 32, 33.

The prospects of the profession are thus sketched:—

"While such motives as these call on us for renewed and vigorous exertions, an animating prospect presents itself to our view. Medical science in the United States is already beginning to assume a national character. The uniformity of our medical schools; the co-operation of our medical societies; our text-books, adopted as the standards of education in all our institutions; our periodical journals, which convey the same intelligence throughout the country; as well as the genius and constitution of our government, are all tending to such a result. We have before us a country unexplored, almost boundless in extent, and inexhaustible in its resources. A country possessing every variety of climate, and consequently calculated to develope every form of disease. A soil abounding in medicinal plants and minerals, which chemistry has not yet analyzed, and but few of which have been applied as medical remedies. With such a field before us, what claims have not humanity and science on our best exertions; and with well-directed efforts, aided by the light that now beams upon us, what may we not hope to accomplish!

"If, in sixty years, with the limited means we have possessed, and with all the difficulties we have had to encounter, we have produced the best system of medical education, the most perfect code of medical police, that has been exhibited to the world; if we have produced some of the best practical and elementary books, and some of the most eminent physicians and surgeons of any age or country; if we have done this, in the short period of sixty years that are passed, what will be our advance in sixty years to come? May I not, with propriety, to use the language of a distinguished scholar of our country, say on this, as he has done upon another occasion,—'He who shall stand where I stand, sixty years hence, and look back on the present condition of medical science, from a distance equal to that from which we contemplate the founding of the first medical school in America, will sketch a contrast far more astonishing, and will speak of our times as the day of small things, in stronger and juster language, than any in which we can depict the poverty of the science in the days of our fathers.'"—p. 35–37.

The discourse closes with some pertinent remarks on the origin, design, and prospects of the Washington school. We have extended this notice so far, that we have not room for

this portion of the address. Our most heartfelt wishes attend its success and permanent prosperity; and its situation is well calculated to ensure to it both.

Before closing, we must not omit to notice the valuable information scattered throughout the notes appended to the work; and we again repeat the expression of our warmest approbation of the literary and professional merits of this very able discourse.—*O si sic omnes!*

Medical and Philosophical Intelligence.

FOREIGN.

ANATOMY AND PHYSIOLOGY.

M. Defermon on the Section of the Pneumogastric Nerves.—We think that the following conclusions of the learned Editor of the Bulletin, are more likely to prove correct than those of Dr. Wilson Philip upon the same subject. From experiments on various animals, M. Defermon says, he has uniformly observed that there was little difference in the duration of life, whether the continuity of the nerve was re-established after its section by means of a good or a bad electric conductor, or whether it was not established at all. He also uniformly observed:—

1. That in the two cases, digestion always took place, and that the differences of digestion and respiration seemed to be proportional to the sufferings the animal had undergone in the operation.

2. When digestion appeared to be most advanced, the animal had sustained the least injury from the section; and large animals lived longer than small ones, which were very speedily seized with asphyxia.

3. The more the lungs are gorged with blood, the more rapid is the asphyxia, and the less advanced is digestion. That is, the alimentary substances in the stomach are very little altered, and little moist, inducing us to think that the fibres of the great sympathetic running to the stomach, must have some influence upon the quantity of the gastric fluids, which, according to the experiments of MM. Leroyer and Prevost, are indispensable to digestion.

4. Mechanical irritation of the inferior part of the pneumogastric nerve did not appear to accelerate digestion; or render it more complete.

5. In causing a galvanic current to pass after the section of the pneumogastric nerves, the gorging of the lungs is retarded, and the food contained in the stomach is sensibly different from that in the stomach of animals, on which the section has been performed without the galvanic current.

6. All these circumstances, important as they seem, are only accessory: the real differences depend on the quantity of gastric fluids flowing into the stomach; and the younger the animal is, that is submitted to the experiment, the more copious these fluids will be.

7. The wrinkles of the stomach indicate that much fluid is poured into it during digestion. We can at pleasure produce these wrinkles, by swallowing seltzer, or soda water, a fact which proves that they depend on the presence of the gastric juice.—*Anderson's Quarterly Journal.*

Experiments by Ficinus and Prinz on the Injection of Air into the Veins.—Professor Waldinger, in his Memoir, "Ueber die Nahrungs und Heilmittel der Pferde," has related many experiments, in which he injected various gases into the veins of horses, and other large animals, without much inconvenience. Oxygen and atmospheric air could be supported in a considerable quantity; azote and hydrogen produced more or less inconvenience; while carbonic acid gas always caused death. The text-books, however, continue to repeat, that air injected into the veins of animals uniformly causes death.

In order to establish the facts upon which this doctrine rests, Professors Ficinus and Prinz, of Dresden, repeated the following experiments. 1. On the 18th of December, 1824, at 4 o'clock P. M., they opened the left jugular vein of a horse, and injected, by means of a bladder and tube, 54 cubic inches (Paris measure) of atmospheric air. Before the injection the pulse was 44, and the respiration 18 per minute; after the injection the pulse rose to 67-68 and 70, and the respiration to 48. The horse was laid down, after which the respiration continued the same, but the pulse sunk to 57. The horse was raised, and remained restless, but gradually recovered; and by 10 o'clock, six hours after the injection, was perfectly well. 2. On the 28th of December, 1824, an equal quantity of oxygen gas was injected into the jugular vein of the same horse, when the pulse was 30, and the respiration 12 per minute. Immediately the pulse rose to 64, and the respiration to 40 and 44, with short palpitations of the heart. The animal, however, remained lively and well. An hour after the injection the pulse fell again to 38, and the respiration to 14; and in two hours the animal was in its natural state of health. Dr. Erdmann, who gives these details, does not mention whether the injection was made quickly or slowly, circumstances which would considerably affect the phenomena.—*Ib.*

Structure of the Nerves.—M. Bogros read a Memoir relative to the Structure of the Nerves, before the Royal Academy of Sciences. In this memoir the author observes, that two substances enter into the composition

of the nerves,—the *neurilema*, composed of cellular tissue, and the *medullary fibre*. The ganglia were considered as composed of two parts: the medullary threads, in fact, penetrate into them, are stripped of their neurilema, are rolled up, and (as it were) united together by a particular substance, sometimes greyish, at others yellow or reddish.

M. Bogros subjected the nerves to new experiments; from which it results, that, independently of the neurilema and the pulp, a central canal is to be recognised. With the assistance of tubes, nearly resembling those by which mercury is injected into the lymphatic vessels, but with finer points, he succeeded in injecting the nerves. No preliminary preparation is required for the experiment; it was even performed upon living animals. The following are the principal facts related:—

When a nerve is pierced by the point of a prepared tube filled with mercury, the injection runs through all the filaments furnished by the nervous chord, to their farthest extremities: it may be traced in the papillæ of the skin, the mucous membranes, and muscles; the injection also extends itself towards the origin of the nerve; and, lastly, when thrown into a single filament, it always extends to several others, by means of anastomosing canals. If, after having injected the nerve, it is cut, a round and regular opening is to be observed in the centre of the pulp; and, even without the injection, if the centre of the pulp is carefully examined, an obscure point may be seen,—that is, the opening above mentioned; and, by placing the point of the tube in this place, the nerve is injected.

When a nerve is deprived of its neurilema by nitric acid, similar results are obtained: when, on the contrary, the pulp is destroyed by an alkaline ley, injection is performed badly; it stops, and does not present the same regular and cylindrical aspect. Lastly, if spirits of turpentine are injected, and the nerve is then dried, the structure of the canals is visible to the eye. Mercury flows through the filaments of the great sympathetic nerve, and shows canals similar to those found in the other nerves. Thus, an injection thrown into the inferior cervical ganglion has penetrated through the cardiac nerves to the heart; and, from the great sympathetic, it has reached the semilunar ganglion, and the branches that extend from it. When the injection reaches the ganglia, they swell, and present the appearance of a number of canals communicating with each other, and turned and twisted upon themselves. The injection of the intervertebral ganglia takes place in a peculiar manner: they swell immediately; afterwards the injection penetrates into the venous network, situated between their proper surface and the covering with which they are furnished by the dura mater, and thence into the veins of this membrane itself. At last, the injection is seen to pass across the roots, and to fall into the cavity of the dura mater; a result which arises either from ruptures easily made in this point, where the pulp is very soft, or from this effusion taking place through natural openings. An injection cannot be thrown into the roots, nor *a fortiori* into the spinal marrow: it could not pass above half an inch when the pulp

was torn, from whence resulted an opening through which the mercury escaped. The injection penetrates into the veins sometimes, but never into the arteries or lymphatics. The anastomoses take place by the meeting of the medullary canals, or by a confusion of the pulps: where they take place, the nerve increases in size.

The injection has been performed on living frogs. At the beginning, convulsions were produced; when it was finished, a perfect paralysis was produced. These experiments have been repeated on the four classes of vertebrated animals.

In an anatomical point of view, this discovery is very valuable; physiologically, the existence of a canal in the nerves opens a vast field of inquiry; and as there is a law in the animal economy, that every cavity which is not lined by a mucous or serous membrane, is closed by an adhesion of its sides, if it is not preserved by the presence of some other body, is it not, therefore, probable that the medullary canal serves for a kind of circulation?—*Lond. Med. and Phys. Jour.*

PATHOLOGY.

On the Mean Duration of Intermittent Fever.—M. Bailly has read, before the Royal Academy of Sciences, a memoir on this subject, the result of a great number of observations collected in different climates,—such as Rome, Montpellier, Lyons, and Canada; and he gives a period of fourteen days as the mean duration of intermittent fever. The remarkable circumstance to be observed is, that this period is precisely that in which acute diseases run their course. This analogy offers another powerful motive to assimilate these two kinds of morbid affections; the identity of which is further proved by the traces of inflammation which are almost always found in the internal organs, as the consequence of intermittent fevers.

M. Bailly afterwards considers the physiological cause which determines a disease to prolong its course for a definite period of time. Inflammation, according to him, is not merely the result of an accumulation of blood in this or that organ; it consists in a fixed and permanent alteration of the diseased tissue, and this alteration can only be destroyed by those changes which nutrition determines; but, as these changes are necessarily slow and successive, it follows that every inflammation must occupy a fixed time to arrive at its maximum, and disappear. Experience can only determine how many organic changes are necessary to destroy that alteration in a tissue which constitutes a state of inflammation; and, if intermittent fevers take two weeks to be cured, it may be concluded that the internal organs, when inflamed, require that space of time to pass through those stages necessary to reproduce a healthy state. As to the singular tendency which the greater part of diseases have to run their course by weeks, there is nothing that need surprise us; since the organic movements of the healthy state present a similar course. The first dentition generally begins at the seventh month, the second at the seventh year. Menstruation is equally regular with regard to its septenary periods.—*Ib.*

Cure of a Hydrophobic Patient.—Professor Rossi has published a very interesting case, of which we here give the outlines; premising that, from the documents annexed to the Memoir, it would appear that every proper means have been employed to prove its truth and authenticity. A person, aged thirty-two, of a sanguine temperament, in excellent health, and of great liveliness, was attacked by a strange cat on the 22d of October, 1824, which fastened with its teeth on his left hand, until with the other, which received numerous scratches, he was at length enabled to drive it away. There were three wounds on the left wrist, two of which, from the teeth of the animal, had penetrated through the skin, and bled profusely; the other was a lacerated wound, about two fingers'-breadth in length, on the other side of the hand: the parts were merely washed with cold water. The cat belonged to a neighbour, and for two days had attempted to bite those who gave it food: it was killed on the following day, having all the symptoms of rabies. At the end of twenty-four hours, a surgeon cauterised two of the wounds, but very superficially; omitting, however, the third wound, which was the most extensive. Some days after, the patient called on Dr. Castagno, of Lanzo, who sent him with a letter to Professor Rossi, for his advice upon the case; in consequence of which, on the 19th of November, (that is, twenty-seven days after the accident,) the wounds were thoroughly cauterised again, and the sublingual glands were examined, in order that their subsequent condition might be watched. The patient was directed to take vinegar and the genista luteo-tinctoria, internally; of which he drank a glassful night and morning.

No alteration was perceived, either in the habit, manner, or health of the patient, until the beginning of December, when he began to be melancholy, to seek for solitude, and wept violently; his sleep was disturbed by frightful dreams, his appetite failed, and he disliked his wine, of which he had been before very fond;* his eyes glistened, his face was red, and his mouth was always full of saliva. The left sublingual gland was larger than the right, which continued in its natural condition; and he felt an itching in the part bitten.

On the 10th of December, the sublingual glands were cauterised, by the application of a heated iron button-cautery, three successive times, applied to each gland. The operation was very painful; three hours afterwards a smart attack of fever took place: rest, and a rigid regimen, were prescribed. At the end of six or seven hours, a grain of opium was given, by which he obtained three or four hours' sleep. The next day the fever, pain, and salivation, were diminished. The same means were employed, and the following day he was quite free from fever. Three or four days afterwards, he assumed his usual mode of life; and now enjoys the most perfect state of health.—*Ib.*

---

* He afterwards said, that his aversion to water was at that time equally strong.

Diagnostic of Venereal Gonorrhœa.—The Baron Von Wedekind affirms, that the true diagnostic sign of the above disease being really the produce of impure connexion, is the appearance of two small lenticular knots, situated one on each side of the frœnum, immediately behind the orifice of the urethra; which little swellings may always be distinguished by the touch, and often by the eye. The Baron believes them to be small glands, and thinks that from them the contagion of gonorrhœa proceeds.—*Ib.*

Enlargement of the Heart.—A man, sixty-two years of age, came under Dr. Howison's care, on the 14th of January, 1823, complaining of uneasiness or dull pain at the lower part of the sternum, great occasional dyspnœa, especially when at stool, and aggravated at night, so that he is obliged to keep in the semi-recumbent position. He starts from his sleep, and has slight delirium at times. Countenance healthy, except a slight livor of the lips—lower extremities considerably œdematous—urine scanty and red—thirst, tongue foul—bowels costive—pulse full, and not above 30 in the minute, with irregularity. Reports that, for some months past, he has had severe palpitation of the heart. At present, it can merely be felt beating, and seems to labour in its function. He has enjoyed good health till within these three years. His complaint has rapidly increased since, by cold and fatigue, to which he had been subjected four months ago; says he has been much benefited by digitalis, blisters, and aperients. We need not detail the treatment, which did no good. He got daily worse, and expired on the 19th of the same month.

Dissection. Lungs healthy—half a pint of water in the right side of the chest—about six ounces in the left side—pericardium appeared very vascular externally, looking as if it had been covered with powdered vermilion—no water in pericardio—*heart three times its natural size*, and very vascular, having also the vermilion-looking surface, with scattered spots, resembling purpura. The right chambers were greatly enlarged, and the margins of the valve thickened and cartilaginous. In the left side, the parietes of the ventricle were natural—the mitral valve cartilaginous. Nothing is said of the size of this cavity. The morbid appearances in the abdomen were not important. The liver, however, was enlarged, indurated, and of a pale colour.

Dr. Howison seems to think that these morbid appearances do not account satisfactorily for the phenomena. We conceive that a heart enlarged to three times its natural size is no trifle. We have seen much less organic derangement than this produce all the symptoms above-mentioned, (excepting, perhaps, the remarkable slowness of the pulse,) and destroy life. Diuretics are the most important remedies in such cases, with constant counter-irritation over the region of the heart. Life may often be considerably prolonged in such cases by judicious treatment.—*Johnson's Medico-Chirurgical Review, October.*

SURGERY.

Tracheotomy in diseased Larynx.—A man, thirty-six years of age, suffered for several months, in the year 1820, with ulcerated sore throat, supposed to be syphilitic, and which was healed by nitric acid and small doses of mercury. The ulceration occasionally returned, and was removed by the same remedies. Latterly the membrane of the larynx had been frequently affected with inflammation, giving rise to hoarseness and some difficulty of breathing. At one period there was acute inflammation about the cricoid cartilage, which was relieved by leeching and blistering. Under pil. hyd. and decoctum sarsæ, he seemed to get well; but he became subject to violent paroxysms of suffocation, in one of which he seemed at the point of death, when a piece of bone was expelled through the glottis with great force. It appeared to have come from the triangular bone of the sternum, where there had been swelling and inflammation some time previously. After this, his voice and respiration improved. Fumigations of cinnabar and a course of the blue pill set his health up once more. But afterwards the paroxysms of dyspnœa returned, and became gradually more aggravated. In fact, the disease of the larynx gained ground, and our author began to foresee that tracheotomy would be the ultimate resource. Early on the morning of September the 25th, Mr. G. was summoned to his patient, who was reported to be dying. On arriving, he found him somewhat recovered from the severest paroxysm he had ever experienced; but still his breathing was laborious and difficult. Venesection had afforded relief. Mr. G. not being provided with a canula, was obliged to put off the operation till 3 in the afternoon, when he found his patient supported in a chair and quite insensible. No pulse could be felt at the wrist, and it was hard to say whether he breathed or not. His face was suffused with blood, and his lips livid. The trachea was instantly laid open by a longitudinal incision, and a circular piece, half an inch in diameter, was cut out by means of a scalpel. The air rushed in, and the patient's breathing quickly improved. After twenty minutes a canula was introduced, and caused much irritation at first, with a convulsive cough, which expelled much bloody mucus. This irritation became less and less, as the repetitions of the introduction took place. And in an hour he could bear the canula very well. This tube he wore more than six months, without inconvenience; he was then able to lay it aside, and his voice was quite restored. This is the second instance of a tube being long worn in the trachea. Mr. Price, of Portsea, has now worn a tube about ten years, and breathes almost entirely through it. He enjoys good health.

We expect to see the day when the operation will be often performed in ulcerations of the larynx, so as to give the said ulcerations time to heal, and the cartilages to exfoliate. We have no doubt that many cases of laryngeal phthisis might be saved by this operation. Ulceration of the larynx would heal, when the parts were quiet and no air passing, which would

otherwise go on from bad to worse, and destroy the patient's life.—*Johnson's Medico-Chirurgical Review.*

Treatment of Ganglion.—Dr. Cumin, surgeon to the Lock Hospital, Glasgow, proposes an operation for ganglion, in some respects novel. The more usual method is to rupture the sac by a blow of a book or other solid body. But this, Dr. C. thinks is a clumsy and unsurgical proceeding. Our author's method is to draw the skin to one side, and then, by pushing in a cataract needle obliquely, to slit the sac of the ganglion freely. The skin is then to be brought to its natural position, forming a kind of valve, and the contents of the ganglion to be squeezed out into the adjacent cellular tissue. Pressure is to be applied; and when the fluid accumulates, it is again to be pressed out, and so on, till the secretion ceases altogether. A case is related in illustration, and our author informs us that he has since treated several others in the same way.

A nearly similar method is described by Jourdan. He directs the skin to be drawn to one side, and the cyst to be divided with the point of a lancet. The contents are to be squeezed out, and the skin to be brought to its natural site, so as to form a valve. Pressure is then to be made, and the operation to be repeated, if necessary. The only difference between these two surgeons consists in the form of the instrument and the disposal of the fluid. Dr. C. squeezes it into the surrounding cellular tissue—Jourdan squeezes it out altogether. Now as the wound is made on the same principle in both cases—namely, in a valvular way—we conceive that the fluid, in the first instance, might just as well be squeezed out, if it will come out easily, as into the cellular membrane in the vicinity of the ganglion. The two plans, however, are so nearly alike in principle, that it is not worth while to discuss the superiority of one over the other.—*Ib.*

THERAPEUTICS.

Virtue of the Black Pepper as a Febrifuge.—Dr. Louis Frank having invited the profession to try the effect of the extract of black pepper in intermittent fever, prepared by digesting, in a glass vessel, one ounce of the pepper in twelve ounces of distilled water, for thirty-six hours, in a water bath, and evaporating the liquor to the consistence of an extract. This remedy was tried on nine individuals, affected with intermittent fever of different types, in doses of four, eight, ten, or twelve grains, dissolved in water, in some cases, given in the form of pills in others, by Dr. Clock of Trent; and the effects surpassed his warmest expectations.

From these experiments, the Doctor concludes that the extract of pepper is not only one of the best succedaneums for the bark, but that it actually is very preferable to it, on several accounts: 1st. It never produces disturbance of the stomach or bowels. 2d. Because it never failed in producing its curative effect. 3d. Those who were cured did not, in any one

instance, experience a relapse. 4th. It promotes a regular alvine discharge, as well as the excretions of urine and sweat. 5th. None of those who were cured experienced that sensation of languor so common to a state of convalescence.—*Ib.*

Poisoning by Arsenic and Sublimate.—A young pharmaceutical student, of sanguineous temperament and robust constitution, mixed up, in a fit of despair, a drachm of arsenic and the same quantity of oxymuriate of mercury, into ten boluses, nine of which he swallowed on the spot, and retained the tenth, to show the kind of poison he had taken, convinced that his death would be very sudden from the dose taken. It was not so, however, and in the space of five minutes, on feeling a burning heat in his bowels, he repented of the rash act, and quickly swallowed eighteen grains of ipecacuan, which caused the rejection of a part of the poison. The fear of death now induced him to cry out furiously for aid, and M. Julia-Fontenelle was instantly on the spot. He found the patient rolling on the floor, the picture of misery and terror. He frankly avowed all that had passed. Abundance of warm water was taken into the stomach, and black matters were vomited forth. These, on subsequent analysis, presented the poisonous substances swallowed. Several other medical gentlemen were now summoned to the aid of M. Fontenelle. Warm milk was thrown into the stomach in large quantities, and also into the bowels by injection. The patient experienced excruciating pains, and insatiable thirst. In four hours from the accident he had convulsions, and appeared at the point of death. In two hours more, however, he appeared a little better. A diarrhœa came on, which lasted eight days. Sugar and milk were assiduously administered, together with whites of eggs. *Next day*, face flushed, and countenance wild—abdomen extremely painful—constant vomiting, diarrhœa, and insatiable thirst, with convulsive twitchings. Milk still for drink—cataplasms to the abdomen—twenty-four leeches to the chest. *Third day*, the symptoms ameliorated—same treatment. *Fourth day*, the convulsive movements more strong—facies Hippocratica—frequent vomiting of green matters—violent colic and delirium—bled largely from the arm—warm bath—stimulating plaster to the epigastrium—large draughts of whey. *Fifth day*, no better—large blister to the breast—sinapisms to the legs. *Sixth day*, the vomitings less frequent—delirium milder. During the next two days, the symptoms still more favourable. Mercurial ptyalism and ulcers in the mouth—extreme debility. By the twelfth day he began to convalesce, and by the end of three weeks he was able to undertake a journey of 150 miles to his native air. He has since enjoyed good health, and is become robust. —*Ib.*

Treatment of Scrofulous Ulcerations.—Mr. Rennie wishes to draw the attention of the faculty to certain topical applications in scrofulous ulcerations. Having witnessed the beneficial effects of *pitch* as a stimulating and

detergent application to foul and indolent sores of this nature, he was led to form it into a plaster of such consistency as to combine pressure with the peculiar qualities of the pitch.

"The following compositions, after experimental trials, have been found to combine, in the greatest perfection, the requisite qualities as above described:—

I. *Medium.*

"℞. Picis Nigræ, p. j.
——— Liquidæ, p. iss.
——— Resinæ, p. ij. M. ft. emplastrum.

II. *Soft.*

"℞. Picis Liquid. p. iss.
——— Nigr. p. j.
——— Resinæ, p. j. M. ft. emp.

III. *Hard.*

"℞. Picis Liq. p. iij.
——— Resinæ, p. iv. M.

IV. *Solid.*

"℞. Picis Nigræ, p. ij.
Emp. Resinæ, p. j.
—— Ceræ, p. iij. M.

"To be heated and spread at the time of application, not, however, too thinly. The best thickness seems to be from one to two lines." 194.

With regard to constitutional treatment in cases of scrofula, Mr. R. wishes to remark that, in his experience, the exhibition of calomel, in minute doses, frequently repeated, is an effectual and unsuitable method of procedure. "The mercurial not being in doses sufficiently active to carry itself off, or clear out offending matters, remains in the system exciting the mercurial irritation; and, notwithstanding a protracted course, accumulations of morbid fæcal matter are frequently found to exist." We are not advocates for allowing fæcal accumulations to take place; but we have seen so much benefit from small doses of mercury in improving the secretions, and in that way improving the general health, that we cannot consent to abandon the procedure, notwithstanding the respect we entertain for Mr. Rennie's opinions. We generally give some smart but unirritating purgative, every third or fourth day, while pursuing the alterative course, and thus avoid the chance of fæcal accumulations. But we must hear Mr. Rennie.

"It appears to me that the greatest benefit is derived from calomel, when prescribed in adequate doses to excite considerable activity both of the secreting and peristaltic functions, and followed, within eight or twelve hours, by such other aperients as completely to evacuate the intestinal canal.

"This active operation will not bear to be repeated oftener than once in four to six days. One advantage is gained by delay, that the constitution

has time completely to recover from the mercurial irritation and the depressing effect of copious evacuation, whilst morbid accumulations are sufficiently obviated.

"So long as the discharges continue unhealthy, perseverance in aperient measures is the chief indication. To obviate unpleasant effects from the continued use of active mercurials, it is advisable, after the few first repetitions, to interpose mild doses of rhubarb and soda, or magnesia, prescribing mercurials only once in six to twelve days, as occasion requires." 196.

Our author throws out some judicious hints respecting the exhibition of mercurials in cold, and especially damp weather, in which seasons much inconvenience is often experienced from the use of calomel. It then frequently produces tormina and tenesmus, "in a manner so capricious as no foresight could anticipate." The distention of the alvine viscera, in scrofulous constitutions, is, in Mr. R.'s opinion, dependent on a peculiar disordered condition of the hepatic functions, "consisting not of acute inflammatory action, nor of permanent alteration of structure, but of vascular congestion and inactivity of the vital functions, dependent or diminished vital power, together with suspended, irregular, or depraved biliary secretion. It is in the power of correcting this condition of the alvine secretions that the beneficial effects of mercurials depend. Speaking of tonics, Mr. Rennie observes:—

"Notwithstanding the general debility so invariably attendant on the scrofulous state of the constitution, I am convinced that the administration of this class of remedies is much seldomer advantageous than is perhaps supposed. On the restoration of healthy hepatic and alvine functions, it is surprising how speedily the youthful constitution regains vigour, and every symptom of debility and relaxation disappears. As conducive to this effect, the sedative and invigorating influences of pure air, moderate exercise, equable and warm clothing, and generous diet, are unquestionably of the first importance. Where these requisites are possessed, tonic remedies are less necessary; and where these advantages are not enjoyed, they frequently do more harm than good.

"The system generally found most suitable, has been to administer an alterative mercurial every sixth night, and a full purgative next morning; for two days thereafter tonics; the third evening or morning a mild aperient of rhubarb, with alkali or magnesia; then tonics for two days, or, at most, three: after which, the alterative and purgative as before." 198.

Our author has found better effects from the sulphate of quinine, in allaying irritability, and "counteracting that febrile diathesis depending on stomachic atony," than from any other tonic at present known. We cannot follow Mr. Rennie through his detail of the local treatment of scrofulous sores, but refer to the paper itself for fuller information on that point. The communication is, upon the whole, creditable to the author.—*Ib.*

Sulphate of Quinine.—This invaluable medicine is daily extending in reputation, and will, we are convinced, soon become one of the most im-

portant in the Pharmacopœia. The great drawback is its excessive price, and therefore we were rejoiced to find announced in one of the foreign Journals, a mode of preparing the quinine and its sulphate, which will effect a great reduction of expense. M. Guerette, chief apothecary to the French forces, has discovered that, from bark, after it has yielded the infusion, decoction, and watery extract, almost as much quinine and sulphate of quinine may be obtained, as from bark that has *not* yielded the above officinal preparations. He was led to this discovery by observing that from the aqueous extracts of cinchona, little or no quinine could be obtained; hence it was evident that this valuable substance was left behind in the refuse. It is, indeed, extraordinary that chemists did not see into this before now, knowing as they did, that it required the strongest alcoholic menstrua to extract the quinine from the bark.

A commission has been ordered to examine M. Guerette's memoir, and repeat his experiments, and their report is confirmatory of his discovery. The formula is not yet published by M. Guerette; but we should suppose it cannot differ materially from that employed in obtaining quinine in the common way from unreduced cinchona.

The effect of the discovery on the price of the medicine will soon, we hope, be manifested both on the Continent and in this country.—*Ib.*

MEDICAL JURISPRUDENCE.

Feigned Diseases. Vomiting produced at will by Pressure on the region of the Stomach.—On board the Alkmaar hospital-ship in the Baltic, a patient laboured under such frequent and violent irritation of the stomach, as to induce a belief, at the commencement of the case, that considerable morbid action was going on in that organ. Particular attention, therefore, was paid to the man, and after a little time it was observed that the vomiting regularly occurred at certain periods, (namely, when the physician to the fleet was paying his morning or evening visit to the sick,) and that in the absence of the medical officers the patient ate his allowance of food without any vomiting being produced.

These circumstances excited suspicion, the patient was in consequence narrowly watched, and it was discovered that at the time of the expected visit, and before the *vomiting* commenced, he was in the habit of making violent pressure on the region of the stomach, with his hand applied under the bed-clothes. Measures were in consequence taken to secure his hands in proper time, the *vomiting* immediately ceased, and the imposture being detected, the man was soon dismissed cured.

I have since, says Mr. C. Hutchinson, the reporter of this case, become convinced, both from observation in my own practice and from conversations with other medical men, that certain persons do possess the power of thus exciting vomiting at pleasure, by means of pressure applied to the region of the stomach.—*Lond. Med. Journal; August.*

DOMESTIC.

Account of a case in which both carotids were successfully tied by Dr. Macgill of Maryland, in a letter from Dr. Joshua I. Cohen of Baltimore, to Dr. J. Kearny Rodgers of New-York.—I regret with you, that my friend Dr. Macgill has not made known his interesting operation of tying the two carotids. The patient was a female, with fungous tumours of both eyes, whether fungus hæmatodes or not, I am not now sure of. The eyes, however, were both destroyed, and presented an ugly confused mass, which protruded beyond the sockets, and the disease was increasing every day. From the success attending the operation of tying the carotid for tumours about the head, Dr. Macgill was led to adopt this plan in treating his patient, and finding the effect of tying one carotid to be limited to one tumour, he ventured upon the bold attempt of arresting the progress of the other, by cutting off also its supply of blood, which he did about a month after the first operation. It is some time since I heard of the patient, but several months after the last operation, she was doing well and the tumours subsiding. The case occurred near Hagerstown, Maryland, about a year and a half or two years ago. There were some interesting physiological facts observed during the progress of the case, which Dr. M. mentioned to me, but which I must pass by for the present, hoping Dr. M. will be induced to give a full account of every thing connected with this first attempt (I believe) of tying both carotids in the human subject."

An account of a new Instrument for the extraction of coins and other foreign substances from the œsophagus. By NATHAN SMITH, M. D. Professor of Surgery, &c. Yale College.—"I have twice been called upon to remove coins from the throats of children. In both instances, they had descended to near the inferior extremity of the œsophagus, where the passage is a little narrowed, just before entering the stomach. Of course, they were entirely beyond the reach of forceps, or any instrument which might be employed to grasp and thus withdraw them.

"The instrument which the exigencies of the case suggested, and with which I succeeded, was unlike any thing which I have known to be employed for a similar purpose. A very few words, with the acompanying plate, will be sufficient to give an idea of it.

"The shaft of the instrument is a rod of whalebone, twenty inches in length, and of the size of a small quill. Half an inch from one extremity there are attached, at acute angles, like the barbs of an arrow, two wings of silver, an inch and a quarter in length, a quarter of an inch wide, and so thin as to be very elastic and flexible. The extremity, which stands off from the instrument, is convoluted so as to render it blunt, and is a little curved inward toward the shaft of the instrument. The two wings are

pinned to the shaft of the instrument, and may be continued over its extremity, which should terminate with a bead, or obtuse point.

"From the position of the œsophagus between the trachea and spine, the faces of the coin present forward and back. When the instrument is thrust down the œsophagus, avoiding the glottis, as may be done without difficulty, and presenting the barbs one forward and the other back, it will pass either behind or before the coin, and the barb will spring beyond it, and catch it between itself and the shaft, when it may be very easily withdrawn. The manner in which the shaft is embraced by the œsophagus above, prevents its slipping off laterally. In both the cases alluded to, I accomplished the extraction of the coin without any difficulty, and at the first trial. In the second case, after I had once raised the coin into the mouth, the child instantly swallowed it again, though I had almost seized it with my fingers. It returned to the same place, and I again withdrew it at the first trial.

"The barbs are made so thin that should they catch in any of the follicles of the œsophagus, they would be everted sooner than rupture the membrane."—*Amer. Med. Rev. for Sept.* (See Plate I. of this number.)

Smith's new work on Surgery.—We have seen and read with great pleasure the prospectus of "A work on Surgery, selected and arranged from the lectures of NATHAN SMITH, M. D. Professor of Surgery, &c. in Yale College. By N. R. SMITH, M. D." It is proposed that the work shall embrace the following subjects: 1. Physiology of the circulating system, and the spontaneous stoppage of hemorrhage from divided arteries. 2. Amputation. 3. Fractures, with descriptions and plates illustrating splints constructed upon new principles. 4. Dislocations. 5. Necrosis. 6. White swelling of the joints; wounds of the joints. 7. Operation for Hydrocele. 8. The sanative powers of nature, and the abuses of surgery and physic from supererogation. Other articles will probably be added.

It is stated that the above selection has been suggested by the hope of being able to advance something original and interesting in relation to subjects which have been objects of particular attention with the author during nearly forty years of extensive experience in surgery. The work will be published in May or June next, provided a sufficient number of subscribers be procured.

Troy Medical Institution.—The public are respectfully informed that a Medical School is established in the city of Troy, New-York which will commence its operations this winter. In consequence of a negociation with the University of Vermont, the Degree of Doctor in Medicine will be conferred in Troy, upon such students as have complied with the usual prerequisites, immediately after each lecture term.

The following is the resolution of the University of Vermont:

"University of Vermont, *Burlington*, Oct. 3, 1825.

"*Resolved*, That the University of Vermont confer the Degree of Doctor in Medicine upon such Medical Students as shall hereafter, at the Troy Medical Institution, be educated in acquiescence with the general rules and usages of Medical Colleges in the United States; and that this resolution continue in force five years.

"Attest. J. N. POMEROY, Sec'ry."

According to the adopted Constitution of the Troy Medical Institution, the following gentlemen compose the Board of Trustees:

Joseph Russell, Chairman—Townsend M'Coun, Derick Lane, John Paine, Gurdon Corning, Daniel Sackett, Philander Wells, James Mallory, J. Van Schoonhoven, Isaac M'Conihe, Richard P. Hart, Orville L. Holley, William Bradley, Samuel M'Coun, John D. Dickinson, Esaias Warren, George Tibbitts, William Peirce. David Buel, Jr. Secretary—Samuel Gale, Treasurer.

The Board of Trustees of the Troy Medical Institution have appointed to the several Professorships as follows:

William Anderson, M. D. Professor of Anatomy and Physiology, and Lecturer on the Principles and Practice of Surgery.

Amatus Robbins, M. D. Professor of Theory and Practice of Physic and Clinical Medicine.

Elisha Sheldon, M. D. Professor of Obstetrics and the Diseases of Women and Children.

Joel B. Nott, A. M. Professor of Chemistry, Mineralogy, and Geology.

Lewis C. Beck, M. D. Professor of Materia Medica, Pharmacy, and Botany.

The course will commence this season on the third Tuesday of December, and continue until the end of March.

Extracted from the By-Laws.

"The Lectures shall be given after the following arrangement:

Anatomy and Physiology,	through the term,	daily	Fee	$10 00
Principles and Practice of Surgery,	do.	do.	"	9 00
Theory and Practice of Physic,	do.	do.	"	9 00
Obstetrics and the Diseases of Women and Children, three days in the week,			"	6 50
Chemistry, Mineralogy and Geology, five days		do.	"	9 00
Materia Medica, Pharmacy, and Botany, three days		do.	"	5 50

"Popular courses of lectures will be delivered in the evening, during the term, by Professor Nott upon Chemistry, and Professor Beck upon Natural and Experimental Philosophy.

"Every student shall pay to the treasurer, at the commencement of the term, Three Dollars, in aid of the contingent fund, before he may be ad-

mitted to attend any lectures; after which he shall have the option of taking tickets from such Professors and for such Departments as he pleases.

"Every student who shall have maintained a good moral character; attended to the different branches of medicine at some medical institution, or with some regularly educated physician or surgeon for the space of three years, including lecture terms; diligently attended two full courses of lectures at this or some other authorised medical institution, (the last of which shall be at this;) passed a good examination before the faculty, and delivered in a written dissertation on some medical or philosophical subject, to the approbation of the faculty; shall be entitled to the Degree of Doctor in Medicine, upon procuring a certificate from the treasurer that he has paid into the treasury the sum of twelve dollars as his graduation fee."

In presenting the above to the public, the officers of the Troy Medical Institution undertake to promise the exercise of every necessary effort to secure to the Medical Student, the most approved means and best opportunities of instruction, with the kindness and hospitality of the people of Troy.

DAVID BUEL, Jr. *Secretary.*

November, 29, 1825.

P. S. Respectable board and lodging can be obtained in the city at from $1,75 *to* $2,50 *per week.*

Medical Society of the County of New-York.—At the annual election of this Society, held July 6, 1825, the following officers were elected:

Dr. JOHN ONDERDONK, *President.*
.. THOMAS COCK, *Vice-President.*
.. SAMUEL L. MITCHILL, *Corresponding Secretary.*
.. NICOLL H. DERING, *Secretary.*
.. JOHN S. CONGER, *Treasurer.*
.. JAMES M. PENDLETON,
.. J. KEARNEY RODGERS,
.. JOHN B. BECK,
.. JOHN C. CHEESMAN,
.. ELBRIDGE G. DUNNELL,
} *Censors.*

Delegate to the State Society.

.. JAMES R. MANLEY.

At a subsequent meeting Jeremiah Van Rensselær, M. D. was chosen Corresponding Secretary, in the place of Samuel L. Mitchill, M. D. resigned.

QUARTERLY BIBLIOGRAPHICAL NOTICES.

1. *An Essay on the remote and proximate Causes of Phthisis Pulmonalis: being the Essay to which the Prize was adjudged for the year* 1825, *by the New-York State Medical Society.* By ANDREW HAMERSLEY, M. D. of New-York. *With a few Explanatory Notes.* Philadelphia, 1825. 8vo. pp. 54.

THIS is the first Essay to which has been awarded one of the prizes established by a resolution of the Medical Society of this State, at its session in February 1824; and we congratulate Dr. Hamersley upon having been the successful candidate. A subject of more general interest and importance could not have been selected for discussion, than that of consumption; and the manner in which Dr. H. has treated it, does honour, in our opinion, to his industry and acquirements.

---

2. *Catalogue of the Anatomical Museum in the College of Physicians and Surgeons of New-York.* By F. G. KING, M. D. New-York, 1825. 8vo. pp. 43.

From this Catalogue we perceive that the whole amount of specimens in the Cabinet of the New-York College, wet and dry, sound and morbid, does not exceed five hundred and ten; a fact which, we suspect, will excite no little astonishment, when it is known that this collection has been accumulating for, we believe, upwards of twenty years, during several of which an annual appropriation of five hundred dollars has been made by the State for its enlargement. As this is a subject in which the public, as well as the profession, are materially interested, we shall revert to it again at a proper period.

---

3. *An Introductory Lecture, delivered in the College of Physicians and Surgeons, at the opening of the Winter Session, on the 7th of November,* 1825. By DAVID HOSACK, M. D. &c. New-York, 1825. 8vo. pp. 61.

It is with feelings of deep mortification that we have read this Lecture. The object of it, as avowed by the author himself,—viz. to laud his own College and his brother Professors, at the expense of every other College in the country,—is unworthy of a man of Dr. Hosack's station, and can have no other effect than that of degrading still lower in public estimation the College which he undertakes to eulogize. As a literary performance, it is wholly destitute of merit. The style is loose, inelegant, and sometimes grammatically incorrect. The reasoning in favour of the fancied superiority of the New-York school is, for the most part, perfectly puerile, while many of the statements contained in the discourse are incorrect in point of fact. We sincerely hope that our brethren in different parts of the country, will not consider this Lecture as expressing either the language or the feelings of the profession in this city.

4. *An Epitome of Chemical Philosophy; being an extended Syllabus of the Lectures on that subject, delivered at Dartmouth College. Intended as a Text Book for Students. Part I.* By JAMES FREEMAN DANA, M. D. Concord, New-Hampshire, 1825. 8vo. pp. 171.

This work is highly creditable to its author, as well as to the institution to which he is attached. It speaks well for the ample course of chemical instruction which is there given. When the remaining part of the work shall appear, we shall notice it in detail.

---

5. *Case of three remarkable Tumours extirpated from the Nose.* By P. S. TOWNSEND, M. D. of New-York. New-York, 1825. 8vo. pp. 8.

Want of room in this Number, prevents us from giving an abstract of this pamphlet at present. It shall be given in our next.

---

6. *A Conspectus of the Pharmacopœias of the London, Edinburgh, and Dublin Colleges of Physicians: being a Practical Compendium of Materia Medica and Pharmacy.* By ANTHONY TODD THOMSON, M. D. F. R. S. &c. &c. First American, from the fifth London Edition: improved by the additions of the United States Pharmacopœia, Majendie's Formulary, and other new Pharmaceutical preparations. New-York, 1825. 16mo. pp. 229.

An excellent Manual of Materia Medica and Pharmacy, useful both to the student and practitioner. The original work is much increased in value, to the American physician especially, by the numerous additions of the Editors, who, we understand, are Drs. Manley and Drake, of New-York.

---

7. *A Synopsis of the Diseases of the Eye, and their Treatment. To which are prefixed, a short Anatomical description and a sketch of the Physiology of that organ.* By BENJAMIN TRAVERS, F. R. S., Surgeon to St. Thomas's Hospital. *With Notes and Additions*, by EDWARD DELAFIELD, M. D., Surgeon to the New-York Eye Infirmary, and Lecturer on Diseases of the Eye. New-York, 1825. 8vo. pp. 474.

We are exceedingly gratified to see the republication of this valuable work in this country. The anticipations which we expressed in our last Number, in relation to the additions by the American Editor, have been fully realized. They add much, in our opinion, to the value of the work. The typographical execution is worthy of particular commendation, and the plates are exquisitely beautiful.

---

8. *Pharmacologia; comprehending the Art of Prescribing, upon fixed and scientific principles: together with the History of Medicinal Substances.* By J. A. PARIS, M. D. *With Additions, and Illustrations of the Materia Medica of the United States*, by A. W. IVES, M. D. New-York, 1825. 2 vols. 8vo.

Pharmacologia; comprehending the Art of Prescribing, upon fixed and scientific principles: together with the History of Medicinal Substances. By J. A. PARIS, M. D. *With Notes and Additions.* New-York, 1825. 1 vol. 8vo.

Nothing can show more strikingly the merited popularity of the Pharmacologia in this country, than the fact of two different editions being simultaneously published. This makes four American editions of the work.

9. *The Medical Formulary: being a Collection of Prescriptions, derived from the writings and practice of many of the most eminent Physicians in America and Europe. To which is added, an Appendix, containing the usual Dietetic Preparations and Antidotes for Poisons. The whole accompanied with a few brief Pharmaceutic and Medical Observations.* By BENJAMIN ELLIS, M. D., Lecturer on Pharmacy. Philadelphia, 1825. 8vo. pp. 148.

---

10. *Manual of Surgical Operations; containing the New Method of Operating devised by* LISFRANC; *followed by two Synoptic Tables of Natural and Instrumental Labours.* By J. COSTER, M. D. and President of the University of Turin. *The Translation and Notes* by JOHN D. GODMAN, M. D., Lecturer on Anatomy and Physiology. Philadelphia, 1825. 12mo. pp. 265.

Dr. Godman has rendered the profession an essential service in the translation of this excellent work.

---

11. *The American Medical Review, and Journal of original and selected papers in Medicine and Surgery.* Conducted by JOHN EBERLE, M. D. NATHAN SMITH, M. D. GEORGE MC'CLELLAN, M. D. and NATHAN R. SMITH, M. D. Philadelphia, for September 1825. No. 5. In exchange.

We are much pleased with the appearance of this number, and have no doubt that the talents and learning of its editors will very speedily procure for this work a distinguished place among the cotemporary journals of our country.

---

12. *Litterarische Annalen der gesammten Heilkunde herausgegeben von* DR. JUSTUS F. C. HECKER, Professor der Heilkunde an der Universitat Berlin, &c. For March, April, May, June, 1825.

In exchange.

---

13. *Magazin der auslandishen Literatur der gesammten Heilkunde und Arbeiten des ærztlichen vereins zu Hamburgh herausgegeben von* Dr. G. H. GERSON, und DR. NIKOL. HEINR. JULIUS. Four numbers from January to September, 1825.

We find that this Journal contains regular analyses of papers which have appeared in the New-York Medical and Physical Journal. It is highly gratifying to us to be the means of giving so wide a circulation to the valuable labours of our correspondents.

---

14. *The Medico-Chirurgical Review.* Conducted by associated Physicians and Surgeons, and superintended by JAMES JOHNSON, M. D. &c. No. 22. for October.

In exchange. We feel greatly indebted to Dr. Johnson, for the many flattering notices which he has taken more especially of the New-York Medical and Physical Journal, and for the general spirit of liberality which he has shown towards the labours of his professional brethren on this side of the Atlantic. In his 21st number, besides analytical notices of Dr. Coventry on Bronchocele, Dr. Delafield on Paralysis, Dr. J. B. Beck on

Laryngitis, we are pleased to find that he has given a review of the work on Epidemics by our fellow-citizen Dr. Joseph M. Smith, of which he speaks in terms of very high, and as we think, merited praise.

NOTICES.

UNIVERSITY OF THE STATE OF NEW-YORK.

The two Colleges of Physicians and Surgeons attached to the University, commenced their annual courses of lectures at the usual time. The number of students attending the college in this city, is one hundred and sixty-four; that of the college at Fairfield, is one hundred and thirty-five.

New-York City Dispensary.—The Annual Report of the Trustees of this institution, just published, presents a very gratifying statement of the successful efforts made during the last year, to relieve the distress from disease of a large and helpless portion of our rapidly increasing population. The number of patients treated by the physicians is not far from eight thousand—and of these, only seventy-two died. We are also able to state, that the diseases of the out-door patients have been divided into five classes, each of which is attended to by two physicians, at different hours during the day. It is likewise intended by the physicians to publish hereafter a Quarterly Report of the diseases of the institution—which cannot fail to prove at all times a valuable and interesting document.

The Academy of Medicine of New-York.—An Association devoted to the cultivation of Medical Science and its collateral branches, has just been founded in this city. Its members are divided into four classes, to each one of which, distinct departments are assigned for the more successful prosecution of the objects of the institution. The following are the subjects designated for each of the classes:

To the *first* class, Theory and Practice of Medicine, Ethics, and Police.

To the *second* class, Anatomy, Surgery, and Obstetrics.

To the *third* class, Physiology Experimental and Comparative, Pathology, and Morbid Anatomy.

To the *fourth* class, Materia Medica, Chemistry, Medical Jurisprudence, and Natural History.

At the first election held on the 16th ult. the following gentleman were elected officers for the ensuing year:

Felix Pascalis, M. D. *President.* John B. Beck, M. D. John Watts, Junr. M. D. John Stearns, M. D. Joseph M. Smith, M. D. *Vice-Presidents.* Daniel L. M. Peixotto, M. D. *Secretary.* Samuel W. Moore, M. D. *Treasurer.* John K. Rodgers, M. D. *Curator.*

The general plan of the Institution is such, as we feel confident will command the approbation and support of the profession. To the activity

and diligence of its members we look forward with great hopes, and their labours shall always command a prominent department in the pages of this work.

State Medical License.—Candidates wishing to obtain licenses to practise Medicine and Surgery, are informed, that the Censors of the State Medical Society for the Southern District will hold their examinations in the city of New-York. They are requested to apply to either of the censors.

FELIX PASCALIS, M. D.
CHARLES DRAKE, M. D. } Censors.
JOHN B. BECK, M. D.

TO READERS AND CORRESPONDENTS.

1. In the November number of the Philadelphia Journal of the Medical and Physical Sciences, we find the following notice. "The extract from Dr. Wiltbank's observations on the action of the heart, quoted inadvertently from 'Anderson's Quarterly,' in our respected cotemporary the New-York Medical and Physical Journal, is from a paper originally published in this Journal last winter. p. 198." The editors do us justice in attributing this to inadvertence, and we are willing to ascribe to the same cause a similar omission on their part. In the very same number in which they complain of us, they review "an Essay on Conception and Superfœtation," by Dr. John Stearns, and omit inadvertently to mention that the Essay was published in the last number of our Journal.

2. In compliance with the request of Dr. Nathan R. Smith, one of the editors of the "American Medical Review," we have republished from that work, the paper of Professor Smith on fractures of the Femur. We have the more readily complied with this request, although contrary to our usual practice, because we felt desirous of giving a wider circulation to so valuable a contribution to surgical science.

3. It is intended hereafter to devote, under a distinct department, some pages in almost every number of our Journal, to the interesting and important subject of Medical Jurisprudence. It shall consist of original Essays, reports of trials, notices of foreign and domestic works on this subject, &c. In conducting this part of the work, the editors are gratified to state, that they have been promised the most liberal assistance from Dr. T. Romeyn Beck of Albany.

4. Our next number will contain communications from Drs. Manley, T. R. Beck, Townsend, Heustis, Fountain, Rev. Dr. Ducachet, &c.

A CARD.

☞ DR. STEARNS respectfully requests the Editors of the *Medical Recorder* not to assign that as an objection to his theory of Conception, which he considers at variance with its fundamental principles, an insuperable impediment to its success, and a prominent cause of sterility. He also begs leave to refer them to the article on Ergot, in the 666th page of the fifth volume of the Recorder.

INDEX.

A

Absorption of cutis, 282
Academy of Medicine of New-York, 5
Acid Hydrocyanic, 124, 129, 137
Acid Oxalic, 132
Albany, Small-pox, &c. at, 31
Albany, Meteorological Observations in, 141
American Medical Review, 82
Amputation, Dr. N. Smith, on, 313
Anatomy Morbid, Cases of, 308
Anatomy of the Trachea and Bronchia, 135
Anatomical Investigations, Review of, 106
Apoplexy, 80
Aphthæ, 528
Artificial pupil, Delafield on, 145
do. do. New instrument for, 490
Asthma, fatal, 280

B

Beck, Lewis C. on Small-pox, &c. 31
Beck, T. R. his meteorological observations at Albany, 141
Beck, T. R. his Elements of Medical Jurisprudence, Notice of, 287
Bell, John, gains the Boylston prize, 434
Bell, John, on Vaccination, 441
Best's Tables of Chemical Equivalents, Review of, 264
Bibliographical Notices, 142, 287, 434, 580
Bilious fever different from yellow fever, 401
Blood, detection of spots of, 427
Brain, softening of, 135
Bronchia, inflammation of, 279
Bronchitis, 81
Buenos Ayres, Academy of Medicine of, 121
Burns, 542

C

Cæsarean operation, 425
Calomel and opium in Dysentery, 487
Capsular ligament, fracture within, 131
Carotids, tying of both the, 576
Carditis, 519
Case of Carditis, 519
Case of difficult parturition, 516
Case of Exostosis of the Ischium, 369
Case of Fracture, 131
Case of Hæmatemesis, 283
Cases of Hydrophobia, 418, 420, 568
Case of inflammation of the Theca vertebralis, 219
Case of injury of the knee-joint, 372
Cases in Morbid Anatomy, 308
Case of poisoning by Oxalic acid, 132
do. do. by Laudanum, 91
do. do. by Nitrate of Potass, 142
Cases of Spina Bifida, 321
Castor oil, substitute for, 125
Cephalalgia, 81
Chemical Equivalents, Tables of, 264
Chemical Philosophy, by Dr. J. F. Dana, 581
Chicken-pox at Albany, 31
Children, Diseases of, 522
Civiale's Lithontriptor, 141
College of Physicians and Surgeons at New-York, 583
College of Physicians and Surgeons at Fairfield, 583
Colocynth, active principle of, 127
Commencements at the University of New-York, 284
Contagion of Yellow Fever, 95, 399
Conception, new Theory of, 360
Coventry Alexander, on endemic fever, 7
Coventry, C. B. on purulent ophthalmia, 299
Cutis, absorption of, 282
Cynanche Trachealis, 422, 537

D

Dana, J. F. his Chemical Philosophy, 531
Daphne Alpina, 131
Dariste on Yellow Fever, 428
Delafield, E. on Artificial Pupil, 145
Delafield, E. his edition of Travers on the eye, 581
Depuy, C. M. biography of, 266
Detection of spots of blood, 427
Dewees' System of Midwifery, Review of, 376
Dewees on diseases of children, Review of, 522
Diabetes, 125
Diarrhœa infantum, 528
Digestion, N. R. Smith on, 255
Diseases at the N. Y. Hospital, 78
Diseases at Nassau, 185
Disease at the N. Y. Penitentiary, 493
Disease at Puerto Cabello, 500
Dispensary of the city of New-York, 583

Drake, Charles, his case of Exostosis, 369
Dropsy, 83
Drowned persons, water in the lungs of, 277
Dysentery, 82, 487

E

Ellis, Benj. his Medical Formulary, 582
Endemic fever, 7, 394
Enlargement of the heart, 569
Epidemics, Smith on, 93
Epidemic Erysipelas, 330
Ergot, Ward on, 202
Erysipelas epidemic in West Chester, 330
Euphorbia Lathyris, 279, 426
Exostosis of os ischium, 369
Experiments on decapitated robbers, 123
Extirpation of the uterus, 133
Extraction of the head of the Fœtus, 181
Extirpation of tumours from the nose, 81

F

Feigned diseases, 575
Fever, Huestis on, 394
Fever endemic, 7, 204,
Fever Yellow, 401, 428
Fever Typhus Syncopalis, 544
Fissure of the rectum, 242
Fountain, James, on erysipelas, 330
Fœtus, extraction of the head of, 181
Formulary Medical, 582
Fracture, case of, 131
Fracture of the Femur, 474

G

Ganglion, treatment of, 571
Gloninger, John, his case of conversion of disease, 376
Godman, John D. Anatomical investigation, 106
Godman, John D. his edition of Lisfranc, 582
Graves, John I. on Carditis, 519

H

Hæmatemesis, 283
Hamersley, A. Prize Essay, 234, 500
Heart, enlargement of, 569
Heart, cicatrix of, 279
Hibbard, Dr. W. on Hydrocephalus, 507
Hills, John, new instrument for artificial pupil, 490
Hoit, Dr. Moore, on Dysentery, 487
Hooker, Charles, on difficult parturition, 516
Hospital, N. Y. diseases of, 78
Hosack, David, introductory lecture, 580
Hubble, Dr. James on the prenanthes altissima, 484
Hull on hernia, 435
Huestis, J. W. on fevers, 394
Hydrocephalus, 469, 507
Hydrocyanic acid, 124, 129, 137
Hydrophobia, 418, 420, 568

I

Inflammation of theca vertebralis, 219
Intermittents, 567
Intermittents in New-York, 282
Intermittents, Danger of in cities, 113
Introductory lecture by Dr. Sewall, 555
———— by Dr. Hosack, 580
Iodine, dangers of, 133
Ischium, exostosis of, 369
Ives, A. W. on spina bifida, 321
———— his edition of Paris's Pharmocologia, 581

J

Jaundice, 85
Jefferson Medical College, 433
Johnson's Medico Chirurgical Review. 582
Jukes's syringe, 91

K

King, Theodore F. his account of a disease at the N. Y. Penitentiary, 493
King, F. G. his catalogue of museum, 580
Kirckhoff on ophthalmia, 289
Knee-joint, injury of, 372

L

Laudanum, case of poisoning by, 91
Lithontriptor, 141
Lobstein on Phosphorus, 409
Lungs, water in, 277

M

Macgill, Dr. James, ties both carotids, 576
Manley, James R. on menstruation, 52

Medical Schools of the U. States, 140, 560
Medical School of Vermont, 286
Medical Society, transactions of, 138, 245
Medical Institution at Troy, N. Y. 577
Menstruation, 52
Mercury in urine, 126
Meteorological observations atAlbany, 141
Midwifery, system of, 376
Miller on diseases at Puerto Cabello, 500
Miner, Thomas, on typhus syncopalis, 544
Monthly Chronicle of New-York, 143
Moore, Samuel W. on diseases of Hospital, 78
Moore S. W. on poisoning by laudanum, 91
Morbid alterations in infants, 422
Mucous membrane of the bronchia, 279
Mucous membrane of the digestive organs, 417
Museum of New-York College, catalogue of, 580

N

Nassau, Townsend on topography and diseases of, 68, 185
Nitrate of potass, poisoning by, 142
Nerves of the senses, 416
Nerves, structure of, 565
Netherlands, ophthalmia of, 289
New-York, interments in, 113

O

Œsophagus, extraction of foreign substances from, 576
Onderdonk John, his inaugural address, 435
Ophthalmia, 289, 299
Oxalic acid, poisoning by, 132

P

Pascalis, Felix, on interments, 113
———— on vaccination, &c. 222
———— examination of Dariste on yellow fever, 428
Peirson, A. L. his cases of morbid anatomy, 308
Penitentiary, N. Y. disease at, 493
Pericardii Tympanites, 423
Pharmacopœia by Thompson, 581
Pharmacologia by Paris, American edition of, 581
Phlegmasia dolens, 134, 424
Phosphorus, 409
Phthisis pulmonalis, Prize Essay on, 580
Pneumonia, 86
Poisoning, cases of, 91, 132, 142, 572
Prenanthes altissima, 484
Pupil artificial, 145, 490
Puerto Cabello, disease at, 496

Q

Quinine, sulphate of, 574

R

Rensselaer School, 288
Review of Smith on epidemics, 93
———— Godman's Anatomical Investigations, 106
———— Pascalis on interments, 113
———— Annals of Academy of Buenos Ayres, 121
———— Transactions of Medical Society, 245
———— Smith on Digestion, 255
———— Best's Tables of Chemical Equivalents, 264
———— Dewees' System of Midwifery, 376
———— Huestis on Fever, 394
———— Lobstein on Phosphorus, 409
———— Dewees on Diseases of Children, 522
———— Miner on Typhus Syncopalis, 544
———— Sewall's Lecture, 555
Respiration, imperfect in infants, 524
Rectum, Fissure of, 242
Rheumatism, 37
Rodgers, J. K. on inflammation of the theca vertebralis, 219
Rupture of the vena cava, 123

S

Salt, common, corrects fœtor of cancer, 125
Scrofulous ulcers, 572
Seaman, W. F. on injury of the knee-joint, 372
Sewall, Thomas, his lecture, 555
Small-pox at Albany, 31
Smith, Joseph, on epidemics, 93
———— his biography of Dr. Depuy, 266
Smith, N. on amputation, 313
———— on fracture of the femur, 474
———— on extraction of substances from œsophagus, 576
———— new work on Surgery, 577
Smith, N. R. on digestion, 255

Softening of the brain, 135
Spina bifida, 321
Stearns, J. on conception, 360
——————— on hydrocephalus, 469
Stevens, A. H. on extraction of the head of the fœtus, 181
——————— on fissure of the rectum, 242
Sugar in the blood in diabetes, 125
Surgical operations by Lisfranc, 582
Syphilis, 279

T

Tænia, 124
Tests of hydrocyanic acid, 129
Theca, Vertebralis inflammation of, 219
Townsend, P. S. on Nassau, 68, 185
——————— on tumours in the nose, 581
Tracheotomy, 570
Travers on the eye, 581
Troy Medical Institution, 577

U

University of New-York, 140, 438
Urine, mercury in, 126
Uterus, extirpation of, 133
Uterus, laceration of, 425

V

Vaccination, 31, 222, 441
Varioloid, 31, 22, 441
Van Rensselaer on Geology, 288
Vermont, Medical School of, 288

W

Ward, Dr. John, on ergot, 212
Weather of Nassau, 68, 185
Westchester, erysipelas in, 330
Willoughby Westall, on endemic fever, 204
Wiltbank on the action of the heart, 416
Whooping-cough, Dewees on, 525

Y

Yellow Fever, 401, 428

Z

Zinc on Iodine, 133

ERRATA IN No. XV.

In Dr. Fountain's paper—page 331, seventh line from bottom, for *ones* read *ores*.

Page 352, line eleventh from top, for *should operate* read *should not operate*.